



SAFETY MANAGEMENT SYSTEM MANUAL



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Manual Approval

This manual has been reviewed and approved by: (REVISION: ORIGINAL)

Brady Bowers
Company President
Orbic Air

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Revision Control

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Manual Review

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Manual Custody Log

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1 Introduction

1.1 Background

A safety management system (SMS) is essentially a quality management approach to controlling risk. It provides the organizational framework to construct and support a sound safety culture that actively controls its risk exposure. For Orbic Air, the SMS can become an efficient means of interfacing with the FAA and international regulatory agencies. This SMS employs safety strategies and practices by developing and implementing a structured management system to control risk and meet legal responsibilities in aviation operations. This manual is written under the guidance of the ICAO Safety Management Manual and the FAA's AC 120-92B.

1.2 Scope of the Safety Management System

The SMS shall comprehensively examine the functions of Orbic Air and the operational environment to identify hazards and to analyze associated risks. These functions include the organizational structure, processes, and procedures, as well as the people, equipment, and facilities used to accomplish Orbic Air's mission. The specific functional components of Orbic Air include:

1. Safety management;
2. Organization and personnel;
3. Training and proficiency;
4. Flight operations;
5. International operations (when applicable);
6. Aircraft equipment requirements;
7. Aircraft maintenance;
8. Operations policies and procedures;
9. Emergency accident/incident response;
10. Environmental management;
11. Occupational health and safety; and
12. Security.

1.2.1 SMS Structure and Organization

There are four components comprising Orbic Air's Safety Management System; each is an essential piece of a comprehensive safety-oriented management system. All safety management requirements and activities at Orbic Air will have a relationship to these four components:

1. Safety policy;
2. Safety risk management;
3. Safety assurance; and
4. Safety promotion.

1.3 The PRISM Role

Through the development and implementation of the SMS within Orbic Air, Professional Resources In System Management (PRISM) plays an important role in supporting the efforts of Orbic Air. The utilization of PRISM and its online SMS tools will be highlighted throughout this manual.

1.4 Definitions

Accident (Aircraft) – An occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage (Title 49 of the Code of Federal Regulations (49 CFR) § 830.2, Definitions).

Accident (Ground) – An occurrence that takes place on the ground in which any person suffers death or serious injury, or in which substantial damage has occurred.

Accountable Executive (AE) – A single, identifiable person having final responsibility for the effective and efficient performance of an organization's SMS. Depending on the organization's size and complexity, the Accountable Executive may be: the Chief Executive Officer (CEO); the Board of Directors' Chairperson; Unit Commander; Agency Director; a partner; the proprietor; or other top management official.

Analysis – The conversion of data into information, to identify measures that predict safety related problems to allow risk-management decision making, by the identification of trends, deficiencies, and root causes. This involves the processes of identifying a question or issue to be addressed, modeling the issue, investigating model results, interpreting the results, and possibly making a recommendation. Analysis typically involves using scientific or mathematical methods for evaluation.

Assessment – The process of measuring or judging the value or level of something.

Attributes – System Attributes, or the inherent characteristics of a system that apply to an effective SMS. While the six system attributes were first applied with Air Transportation Oversight System (ATOS) fielding, there are differences when applied to SMS, as discussed below:

- **Responsibility** – Who is accountable for management and overall quality of the process (planning, organizing, directing, controlling) and its ultimate accomplishment.
- **Authority** – Who can direct, control, or change the process, as well as who can make key decisions such as risk acceptance. This attribute also includes the concept of empowerment.
- **Procedures** – International Organization for Standardization (ISO)-9001-2000 defines "procedure" as "a specified way to carry out an activity or a process" – procedures translate the *what* in goals and objectives into *how* in practical activities (things people do). Procedures are simply documented activities to accomplish processes, e.g., a way to perform a process. The organization should specify their own procedures for accomplishing processes in the context of their unique operational environment, organizational structure, and management objectives.

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- **Controls** – Controls are elements of the system, including hardware, software, special procedures or procedural steps, and supervisory practices designed to keep processes on track to achieve their intended results. Organizational process controls are typically defined in terms of special procedures, supervisory and management practices, and processes. Many controls are inherent features of the FAA SMS Framework. Practices such as continuous monitoring, internal audits, internal evaluations, and management reviews (all parts of the Safety Assurance (SA) component) are identified as controls within the design expectations. Additionally, other practices such as documentation, process reviews, and data tracking are identified as controls within specific elements and processes.
- **Process Measures** – Ways to provide feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved. A basic principle of SA is that fundamental processes be measured so that management decisions can be data-driven. The general expectations for Component 1, Policy, specify that SMS outputs be measured and analyzed. These measurements and analyses are accomplished in Component 3, SA. Outputs of each process should, therefore, be identified during Component 3 activities. For example, these outputs should be the subjects of continuous monitoring, internal audits, and internal evaluation.
- **Interfaces** – This aspect includes examining such things as lines of authority between departments, lines of communication between employees, consistency of procedures, and clearly delineating lines of responsibility between organizations, work units, and employees. Interfaces are the “inputs” and “outputs” of a process.

Audit – Scheduled, formal reviews and verifications that evaluate whether an organization has complied with policy, standards, and/or contract requirements. An audit starts with the management and operations of the organization and then moves to the organization's activities and products/services.

- **Internal audit** – An audit conducted by, or on behalf of, the organization being audited, e.g., the flight training department audits the flight training department.
- **External audit** – An audit conducted by an entity outside of the organization being audited, e.g., the flight operations department audits the flight training department.

Aviation Service Provider – Refer to definition for *organization* below. *Aviation service provider* is interchangeable with the terms *service provider* and *organization*.

Aviation System – The functional operation or production system used by an organization to produce an aviation product or service.

Change Management/Management of Change – Is an approach to transitioning individuals, teams, and organizations to a desired future state. The process for managing transformation and development within a business or similar organization.

Complete – Nothing has been omitted and what is stated is essential and appropriate to the level of detail.

Competency – An observable, measurable set [pattern] of skills, knowledge, abilities, behaviors, and other characteristics that an individual needs to perform work roles of occupational functions successfully. Competencies are typically required at different levels of proficiency depending on the work roles or occupational function. Competencies can help ensure that individual and team performances align with the organization's mission and strategic direction.

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Conformity – Fulfilling or complying with a requirement [refer to ISO 9001-2000]; this includes but is not limited to complying with Federal aviation regulations. It also includes complying with company requirements, requirements of operator developed risk controls, or operator policies and procedures.

Continuous Improvement – An ongoing effort to improve products, services, or processes. A quality philosophy that assumes further improvements are always possible and that processes should be continuously re-evaluated, and improvements implemented.

Continuous Monitoring – Uninterrupted (constant) watchfulness (checks, audits, etc.) over a system.

Corrective Action – Action to eliminate (remove) or mitigate (lessen) the cause or reduce the effects of a detected nonconformity or other undesirable (unwanted) situation.

Correct – Accurate without ambiguity or error in its attributes.

Documentation – Information or meaningful data and its supporting medium (e.g., paper, electronic, etc.). In this context, *documentation* is different from *records* because *documentation* is the written description of policies, processes, procedures, objectives, requirements, authorities, responsibilities, or work instructions; whereas *records* are the evidence of results achieved or activities performed.

Evaluation – An independent review of company policies, procedures, and systems [refer to AC 120-59, current edition]. If accomplished by the company itself, the evaluation should be done by a person or organization in the company other than the one performing the function being evaluated. The evaluation process builds on the concepts of auditing and inspection. An evaluation is an anticipatory process designed to identify and correct potential problems before they happen. An evaluation is synonymous with the term “systems audit.”

Function – A function consists of specific or discreet actions required by a system to achieve an objective (e.g., an operation that a system must perform in order to accomplish its mission, such as a maintenance action required to restore a system to operation). Such actions may be accomplished through the use of equipment, personnel, facilities, firmware, software, or a combination thereof. In a broader sense, the term function refers to what is expected to be incorporated into each system rather than how the system accomplishes its objective. This makes for a more performance-based system and allows for a broad range of techniques to be used to accomplish the performance objectives. This, in turn, maximizes scalability while preserving standardization of results across the aviation organization communities.

Hazard – Any existing or potential condition that can lead to injury, illness, or death; damage to or loss of a system, equipment, or property; or damage to the environment (environmental issues are not within the scope of the SMS). A hazard is a condition that might cause (is a prerequisite to) an accident or incident.

Incident – An occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations (49 CFR § 830.2, Definitions).

Just Culture – A Just Culture is one that has both an expectation of, and an appreciation for, self-disclosure of errors. A “just culture” allows for due consideration of honest mistakes. It is an atmosphere of trust in which people are encouraged to provide essential safety-related information - but in which they are also clear about where the line must be drawn between acceptable and unacceptable behavior.

Lessons Learned – Knowledge or understanding gained by experience, which may be positive, such as a successful test or mission, or negative, such as a mishap or failure. Lessons learned should be developed from information obtained from inside and outside of the organization and/or industry.

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Likelihood – The estimated probability or frequency, in quantitative or qualitative terms, of an occurrence related to the hazard.

Line Management – The management structure that operates (controls, supervises, etc.) the operational activities and processes of the aviation system.

Near Miss – Near misses describe events where no property was damaged and no personal injury was sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

Nonconformity – Non-fulfillment of a requirement (refer to ISO 9001-2000). This could include but is not limited to, noncompliance with Federal regulations, company requirements, requirements of operator-developed risk controls or operator-specified policies and procedures.

Objective – The desired state or performance target of a process. Usually, it is the final state of a process and contains the results and outputs used to obtain the desired state or performance target.

Operational Life Cycle – Period of time from implementation of a product/service until it is no longer in use.

Organization – Within the context of this document, the term *organization* refers to Orbic Air as the aviation service provider organization.

Outputs – The product or end result of a SMS process, which is able to be recorded, monitored, measured, and analyzed. Outputs are the minimum expectation for the product of each process area and the input for the next process area in succession. Each of the outputs of a process should have a method of measurement specified by the organization. Measures need not be quantitative where this is not practical; however, some method of providing objective evidence of the attainment of the expected output is necessary.

Oversight – A function performed by a regulator (such as the FAA) that ensures that an aviation organization complies with and uses safety-related standards, requirements, regulations, and associated procedures. Safety oversight also ensures that the acceptable level of safety risk is not exceeded in the air transportation system.

Preventive Action – Preemptive action to eliminate or mitigate the potential cause or reduce the future effects of an identified or anticipated nonconformity or another undesirable situation.

Procedure – Specified ways to carry out operational activities that translate the *what* (objectives) into *how* (practical activities).

Process – A set of interrelated or interacting activities that transform inputs into outputs.

Process Measures – Refer to definition for process measures under the *attributes* definition, above, i.e., a means of providing feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved.

Product/Service – Anything that is offered or can be purchased that might satisfy a want or need in the air transportation system.

Records – Evidence of results achieved, or activities performed.

Residual Safety Risk – The safety risk that exists after all controls have been implemented or exhausted and verified. Only verified controls can be used for assessing residual safety risk.

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Risk – The composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms *risk* and *safety risk* are interchangeable in this manual.

Risk Control – Steps taken to eliminate (remove) hazards or to mitigate (lessen) their effects by reducing the severity and/or likelihood of risk associated with those hazards.

Root Cause - The most basic cause (or causes) that: (1) can reasonably be identified, (2) that management has control to fix and (3) when fixed, will prevent (or significantly reduce the likelihood and/or severity of) the problem's recurrence.

Root Cause Analysis – is a method of problem solving that tries to identify cause(s) of faults or problems that produce negative operating events.

Safety Assurance – A formal management process within the SMS that systematically provides confidence that an organization's products/services meet or exceed safety requirements.

Safety Culture – The product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, the organization's management of safety. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures.

Safety Management System (SMS) – The formal, top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (as described in this document it includes safety risk management, safety policy, safety assurance, and safety promotion).

Safety Objective - A brief, high-level statement of safety achievement or desired outcome to be accomplished by the organization's safety management system. Safety objectives are developed from the organization's top safety risks and should be taken into consideration during subsequent development of safety performance indicators and targets.

Safety Performance indicator (SPI) – A data-based safety parameter used for monitoring and assessing safety performance. High-consequence indicators pertain to the monitoring and measurement of high-consequence occurrences, such as accidents or serious incidents. High-consequence indicators are sometimes referred to as reactive indicators. Lower-consequence indicators pertain to the monitoring and measurement of lower-consequence occurrences, events, or activities such as incidents, non-conformance findings or deviations. Lower-consequence indicators are sometimes referred to as proactive/predictive indicators.

Safety Performance Target (SPT) – The planned or intended objective for Safety Performance Indicators over a given period.

Safety Planning – Part of safety management focused on setting safety objectives and specifying needed operational processes and related resources to fulfill these objectives.

Safety Policy – Safety policy means the certificate holder's documented commitment to safety, which defines its safety objectives and the accountabilities and responsibilities of its employees in regard to safety.

Safety Risk – The composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms *safety risk* and *risk* are interchangeable in this manual.

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Safety Risk Control – A characteristic of a system that reduces or mitigates (lessens) the potential undesirable effects of a hazard. Controls may include process design, equipment modification, work procedures, training, or protective devices. Safety risk controls must be written in requirements language, measurable, and monitored to ensure effectiveness.

Safety Risk Management (SRM) – A formal process within the SMS that describes the system, identifies the hazards, assesses the risk, analyzes the risk, and controls the risk. The SRM process is embedded in the processes used to provide the product/service.

Safety Promotion – A combination of safety culture, training, and data sharing activities that support the implementation and operation of an SMS in an organization.

Severity – The degree of loss or harm resulting from a hazard.

Substitute Risk – A risk unintentionally created as a consequence of safety risk control(s).

System – An integrated set of constituent elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets.

System Attributes – Refer to definition for *Attributes*, above.

Top/Senior Management – The person or group of people who direct and control an organization (ref. ISO 9000-2005 definition 3.2.7 - person or group of people who directs and controls an organization at the highest level). Top management translates the policy into goals, objectives and strategies, and projects a shared vision of the future. It makes decisions that affect everyone in the organization and is held entirely responsible for the success or failure of the enterprise. In many large organizations, this can be the Chief Executive Officer (CEO), chairman/chairwoman, president, or the board of directors; in smaller organizations, this might be the owner of the company.

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2 Safety Management Policy

2.1 Safety Commitment and Responsibility

Orbic Air has a Safety Policy that is developed by senior management and is signed by the accountable executive, the Company President. On an annual basis the Safety Policy is:

- a. Reviewed by the senior management team
- b. Signed and dated by the Accountable Executive
- c. Promulgated/communicated throughout the organization (via post on the wall, via email, via in person meetings, etc.).

The Safety Policy is required to contain the following Elements and this list will be used by the senior management team when they conduct their annual review of the Safety Policy.

- a. The Safety Objectives (see section 1.4 Definitions) of the organization. These will also be captured in the Safety Performance Tracker described in Chapter 4 of this manual in order to show the Safety Performance Indicators (SPIs) and Safety Performance Targets (SPTs) associated with them.
- b. The commitment of the organization to fulfill their Safety Objectives and continuously improve the overall effectiveness of the organization
- c. The commitment of the organization regarding Safety and the promotion of an Effective and Just Safety Culture.
- d. A clear statement about the provision of the necessary resources for the implementation of the SMS
- e. A safety reporting policy that defines requirements and guidance for employee reporting of safety hazards or issues.
- f. A policy that defines unacceptable behavior and conditions for disciplinary action as well as the circumstances under which disciplinary action would not apply
- g. A statement that the organization will comply with all applicable legislative and regulatory requirements and standards (required by ARGUS Standard)
- h. An emergency response plan that provides for the safe transition from normal to emergency operations (required by 14 CFR Part 5.21)
- i. Coordination of the certificate holder's emergency response plans with the emergency response plans of other organizations it must interface with during the provision of its services (required by 14 CFR Part 5.21).

2.1.1 The Accountable Executive's Policy Statement on Safety – Accountable Executive Brady Bowers, President

Safety is our most important consideration as aviators and a core business function as an operator. We recognize that our unique team members at all levels are the most qualified people to prevent accidents at Orbic Air. We are committed to compliance with all applicable regulatory requirements, including those from the FAA. It is also of paramount importance to identify, manage, and mitigate our unique risk environment to as low as reasonably practical (ALARP). With the active and continuous use of our Safety Management System (SMS), we will achieve the highest level of safety performance while delivering our services.

Our Safety Officer will manage the SMS Program and will report directly to me for all safety related issues. Each manager is responsible for implementing and maintaining the SMS program in their respective areas, but the ultimate responsibility for safety at Orbic Air resides with me. We are committed to provisioning all appropriate resources that will result in an organizational culture that fosters safe practices, encourages effective safety reporting and communication, and actively manages safety with close attention to results.

We recognize that the success of our SMS program depends upon us having an effective, or "Just" safety culture. "Just Culture" is a policy in which front-line operators and others are not punished for actions, omissions or decisions taken by them which are commensurate with their experience and training, but where gross negligence and willful violations are not tolerated.

We support the open sharing of information on all safety issues and encourage all employees to report significant errors, safety hazards, or concerns. I pledge that no staff member will be asked to compromise our safety standards to "get the job done". In addition, I affirm that I will support any employee who expresses a safety concern or decides to stop an operation because of a perceived unacceptable safety risk. We will work through any such instance with effective risk management procedures. Our risk thresholds are defined in our SMS Manual and are open for discussion and review.

Safety objectives will be established and monitored through Safety Performance Indicators and Targets. We commit to the fulfillment of these Safety Objectives and the continuous improvement of the safety and effectiveness of the organization.

In an emergency, our main priority is always the safety of personnel. Our second priority is stabilization of the incident. Our Emergency Response Plan includes delegation of emergency authority, assignment of employee responsibilities, and coordination of the emergency response plan with any other affected organizations.

We recognize that familiarity and prolonged exposure without a mishap can result in complacency and a loss of appreciation of risk. Since SMS is a dynamic and continuous process, we will remain vigilant and constantly strive for the highest standard of safety.

We accept that honest mistakes happen, but we will endeavor to anticipate and prevent them before they happen. In addition, we will objectively investigate hazards and incidents for organizational issues instead of placing all blame on the individual.

We ask that all employees monitor and take care of each other and themselves. We encourage you to seek help if you are in physical or mental distress. Building and maintaining trust, teamwork, and keeping a healthy, hazard-avoidance mindset will allow us to drive our own success.

December 15, 2022

Date


Signature
Brady Bowers
President

2.2 Quality Policy

Top management shall ensure that Orbic Air's quality policies and procedures are consistent with the SMS requirements defined in this manual. The quality management (assurance and control) processes existing at Orbic Air shall be consistent with the objectives of the SMS in a collaborative effort to jointly improve the efficiency and performance of the entire organization.

2.3 Safety Planning

This manual shall serve as a safety management plan to meet the safety objectives of Orbic Air described in the company safety policy and the policies contained herein. The requirements established in this manual are anticipated to comprehensively define the SMS at Orbic Air but will require periodic review to ensure continuous improvement is sustained. As such, this manual shall be reviewed at least annually by the Safety Officer, and otherwise as assigned by the Company President. Any emerging planning requirements shall be incorporated in this manual at the earliest practical opportunity.

2.4 Organizational Structure and General Responsibilities

The Company President, known as the Accountable Executive, has the ultimate responsibility for safety at Orbic Air and shall provide resources essential to implement and maintain the SMS. The Accountable Executive shall appoint a manager directly responsible for:

- a. Ensuring that processes needed for the SMS are established, implemented, and maintained;
- b. Reporting the performance of the SMS to the organization; and
- c. Ensuring the promotion of safety awareness and safety requirements throughout Orbic Air.

2.5 Safety Accountabilities

Orbic Air's Accountable Executive, the Company President, is responsible for the continued support of the Safety Management System, to include setting goals and objectives, as well as providing the necessary resources in order for the SMS to function effectively. An important aspect of this activity is also the requirement for these same goals and objectives to be revised and updated at least annually as part of the organization's continuous improvement process. Additionally, all levels of management within Orbic Air must be committed to and held accountable for safety performance. This includes support for, and execution of the processes and procedures defined in this manual.

Each Orbic Air manager is required to:

- a. Monitor conditions to ensure the safe operation of company aircraft;
- b. Actively support the SMS;
- c. Ensure assigned employees are trained and actively participating in the SMS; and
- d. Actively identify and assess the company's risk exposure.

Managers' safety responsibilities involve the supervision of employees, and the provision of resources for those employees to safely carry out their assigned duties. Each manager must be an active supporter of the Orbic Air safety mission, and therefore the SMS. Managers are responsible for integrating SMS activities into their assigned duties and responsibilities. All employees must be encouraged to report hazards and be assured of receiving a response to their hazard identifications. Employees who commit errors should be encouraged to report the circumstances, and not be subjected to punishment for legitimate errors. If there is reason to suspect willful negligence or criminal activity, lawful actions will be taken.

Employees are responsible for conducting their duties in accordance with all company policies, procedures, and government regulations. These rules are written in the interest of preserving the lives and the resources entrusted to each employee, and when the rules are violated, the risk is usually increased. To strive for the highest level of safety, each member of Orbic Air must report errors, incidents, and accidents swiftly and honestly, and without fear of reprisal. If there is reason to suspect willful negligence or criminal activity, lawful actions will be taken.

2.6 Emergency Preparedness and Response

Orbic Air shall establish procedures contained in an Emergency Response Plan to:

- a. Delegate emergency authority throughout the organization;
- b. Assign employee responsibilities during the emergency;
- c. Coordinate the emergency response plan with the emergency response plans of other organizations;
- d. Coordinate and plan the response to accidents and incidents; and
- e. Execute periodic exercises of Orbic Air's response plan at least annually.

This information is detailed separately in the Orbic Air Emergency Response Program (ERP), which contains all of the elements necessary for effective preparedness and response. Preparedness includes continual updating of information, training for employees, and simulation exercises (emergency response drills).

2.7 Appointment of Key Personnel (Safety Organization)

2.7.1 Accountable Executive Responsibility

The Accountable Executive is ultimately responsible for ensuring coordination of all SMS processes, and provides the resources necessary to ensure the SMS performs effectively. At Orbic Air the Accountable Executive is the Company President. The Company President has the ultimate responsibility for safety performance at Orbic Air and shall designate resources and management personnel essential to effectively implement and maintain the SMS.

The Accountable Executive is the final authority over operations conducted under the certificate holder's certificate(s). The Accountable Executive controls the financial and human resources required for the operations conducted under the certificate holder's certificate(s). The Accountable Executive may approve medium level risks (see Risk Tolerability Decision Matrix in section 3 of this manual for additional details)

- a. The Company President shall appoint a lead safety manager, called the Safety Officer to help ensure the processes needed for the SMS are established, implemented, integrated, and maintained throughout the organization
- b. Work with Safety Officer and the senior management to ensure:
 - i. Annual Safety Objectives, Safety Performance Targets and Safety Performance Indicators are established.
 - ii. The Orbic Air Safety Policy statement is reviewed and updated annually, signed by the AE, and visibly promulgated throughout the organization.
- c. Lead the organization's effort to build and maintain an effective and just safety culture.
- d. Conduct or delegate an annual management review to study the status and allocation of resources applicable to the Orbic Air Safety Management System.
- e. Review the Company Risk Profile annually or after an update.

2.7.2 Safety Officer Responsibility

The Safety Officer monitors all aspects of the safety system described in this manual, and acts with the authority of the Company President in all matters regarding safety, and as such, can designate any delegated resources to accomplish Orbic Air stated safety goals and objectives. Specific responsibilities of the Safety Officer are:

- a. Maintain safety documentation; specifically, this manual will be maintained as a controlled document and the requirements listed in the Documentation paragraph of chapter 2 of this manual will be kept current and in good order;
- b. Assist senior management in the development of safety goals, objectives, and Safety Policy Statement for the accountable executive's consideration;
- c. Document the updating of the stated safety goals and objectives at least annually;
- d. Develop and implement the Emergency Response Program including initiating a drill of the plan at least annually.
- e. Work with Senior Managers to develop Safety Performance Indicators and Targets (SPI/SPT).
- f. Monitor Orbic Air's SMS performance and create performance reports for other managers and the accountable executive, as directed;
- g. Maintain the organization's Change List and coordinate with Senior Managers and the Safety Committee to keep it updated.
- h. Maintain the Company Risk Profile.
- i. Facilitate hazard identification and risk management;
- j. Determine the need for and coordinate development of required safety training materials prescribed by national, state, and local laws and regulations or industry best practices;
- k. Evaluate employee hazard identifications for risk and recommend action;
- l. Receive, evaluate, and process all employee hazard reports in accordance with this manual's requirements and recommend action to mitigate risk;
- m. Coordinate all safety activities and act as liaison between Orbic Air and PRISM, as well as applicable governmental agencies and insurance carriers;
- n. Monitoring safety concerns in the aviation industry and their perceived impact on Orbic Air's operations; and
- o. Monitor employee training programs to ensure that safety, health, and environmental information presented is current and satisfies applicable government rules and meets Orbic Air needs.
- p. Ensure satellite bases (if applicable) have a Safety Representative or system in place to ensure safety representation in all locations (requirement of ARGUS Standard).

2.7.3 Director of Operations Responsibility

The Director of Operations (DO) manages the Operations Department personnel and flight operations. His / her primary SMS related responsibilities are:

- a. Participate as requested by the Company President and Safety Officer in the annual review and update of Orbic Air's Safety Objectives and the Safety Policy Statement.
- b. Participate in the organization's Safety Risk Management Process initiated from reported Hazards, Incidents and Accidents, Internal Evaluation Program Findings and Hazards associated with Change Management.
- c. Advise the Safety Officer and the Safety Committee of any Operations Department changes that should be added to the organization's Change List.
- d. Support SMS activities within the Operations Department such as encouraging hazard reporting, conducting safety investigations, developing, and implementing corrective actions, assuring the effectiveness of risk controls, and conducting internal evaluations through the Internal Evaluation Program (IEP).
- e. Work with Safety Officer to develop Safety Performance Indicators and Targets (SPI/SPT) that support the Safety Objectives and goals of Orbic Air.
- f. Advise the Accountable Executive on the performance of the SMS and any need for improvement.
- g. Participate in the organization's emergency response plan training, drills and actual emergencies as assigned.
- h. Provide an operations department representative to the Safety Committee and ensure that person:
 - i. Takes operational issues of concern to the Safety Committee
 - ii. Ensures the Safety Committee meeting minutes and any operations action items are disseminated to the Director of Operations and the operations department.
 - iii. Participates in Orbic Air's Safety Promotion planning and activities.
- i. Actively engage in the organization's implementation and maintenance of an effective and "Just" Safety Culture

2.7.4 Chief Pilot Responsibilities

The Chief Pilot manages the check airmen, pilot training, and certification. His / her primary SMS related responsibilities are:

- a. Participate in the organization's Safety Risk Management Process initiated from reported Hazards, Incidents and Accidents, Internal Evaluation Program Findings and Hazards associated with Change Management.
- b. Advise the Safety Officer and the Safety Committee of any pilot training changes that should be added to the organization's Change List.
- c. Support SMS activities within pilot training such as encouraging hazard reporting, conducting safety investigations, developing, and implementing corrective actions, assuring the effectiveness of risk controls.
- d. Work with Safety Officer to develop Safety Performance Indicators and Targets (SPI/SPT) that support the Safety Objectives and goals of [Operator Name].
- e. Participate in the organization's emergency response plan training, drills and actual emergencies as assigned.
- f. Provide a pilot training representative to the Safety Committee and ensure that person:
 - i. Takes pilot training issues of concern to the Safety Committee
 - ii. Ensures the Safety Committee meeting minutes and any pilot training action items are disseminated and acted upon as required.
 - iii. Participates in [Operator Name]'s Safety Promotion planning and activities.
- g. Actively engage in the organization's implementation and maintenance of an effective and "Just" Safety Culture

2.7.5 Director of Maintenance Responsibility

The Director of Maintenance (DOM) manages the Maintenance Department personnel and aircraft maintenance for all aircraft. His / her primary SMS related responsibilities are:

- a. Participate as requested by the Company President and Safety Officer in the annual review and update of Orbic Air's Safety Objectives and the Safety Policy Statement.
- b. Participate in the organization's Safety Risk Management Process initiated from reported Hazards, Incidents and Accidents, Internal Evaluation Program Findings and Risks associated with Change Management.
- c. Advise the Safety Officer and the Safety Committee of any Maintenance Department changes that should be added to the organization's Change List.
- d. Support SMS activities within the Maintenance Department such as encouraging hazard reporting, conducting safety investigations, developing, and implementing corrective actions, assuring the effectiveness of risk controls, and conducting internal evaluations through the Internal Evaluation Program (IEP).
- e. Work with Safety Officer to develop Safety Performance Indicators and Targets (SPI/SPT) that support the Safety Objectives and goals of Orbic Air.
- f. Advise the Accountable Executive on the performance of the SMS and any need for improvement.
- g. Participate in the organization's emergency response plan training, drills and actual emergencies as assigned.
- h. Provide a maintenance department representative to the Safety Committee and ensure that person:
 - i. Takes maintenance issues of concern to the Safety Committee
 - ii. Ensures the Safety Committee meeting minutes and any maintenance action items are disseminated to the maintenance department.
 - iii. Participates in Orbic Air's Safety Promotional planning and activities.
- i. Actively engage in the organization's implementation and maintenance of an effective and "Just" Safety Culture

2.7.6 Safety Committee

The Safety Committee is a critical part of Orbic Air's SMS, and should be continually used as a resource, providing subject matter expertise to facilitate the safety risk management process. Convenes meetings or briefings as necessary to ensure that many opportunities are available for all employees to participate fully in the management of safety and to elevate the pertinent issues to the appropriate management level;

2.7.6.1 Membership

The membership of the Safety Committee should include the range of functions within the company whenever possible. The following list is the typical Safety Committee membership at Orbic Air. When membership circumstances change, revision to this manual shall occur at the soonest practical time.

- a. Safety Officer, (Chairman);
- b. President;
- c. Director of Operations;
- d. Chief Pilot; and
- e. Director of Maintenance.

2.7.6.2 Responsibilities

- a. Reviews operational safety performance within the functional areas listed in the Scope of the Safety Management System section of chapter 1 of this manual and ensures that hazard identification and safety risk management are carried out as appropriate, with staff involvement as necessary to build up safety awareness;
- b. Reviews and updates the Company Risk Profile at scheduled meetings;
- c. Assesses the impact of operational changes on safety;
- d. Ensures that necessary corrective action discovered as a result of SMS activities is taken in a timely manner;
- e. Check if Safety Policy due for annual review and assist with its promulgation as requested by the Company President or Safety Officer
- f. Check if Emergency Response Plan is due for annual drill and assist in planning for it if requested by the Safety Officer.
- g. Review Safety Performance Objectives/Target/Indicator status
- h. Review new Submitted Hazard/Incident/Accident (H/I/A) Reports and the Safety Risk Management Process for each.
- i. Coordinates the implementation of corrective action plans when required;
- j. Reviews Assurance Checks of previous H/I/A Reports
- k. Reviews hazard report trend analysis.
- l. Reviews new Findings from internal audit checklists and the Safety Risk Management Process for each.
- m. Assists the Safety Officer and Senior Management in the review and update of Orbic Air's Change List. Perform Safety Risk Management Process for identified hazards.
- n. Plans and reviews safety training events
- o. Plans and reviews safety promotion events

2.7.6.3 Meeting Requirements

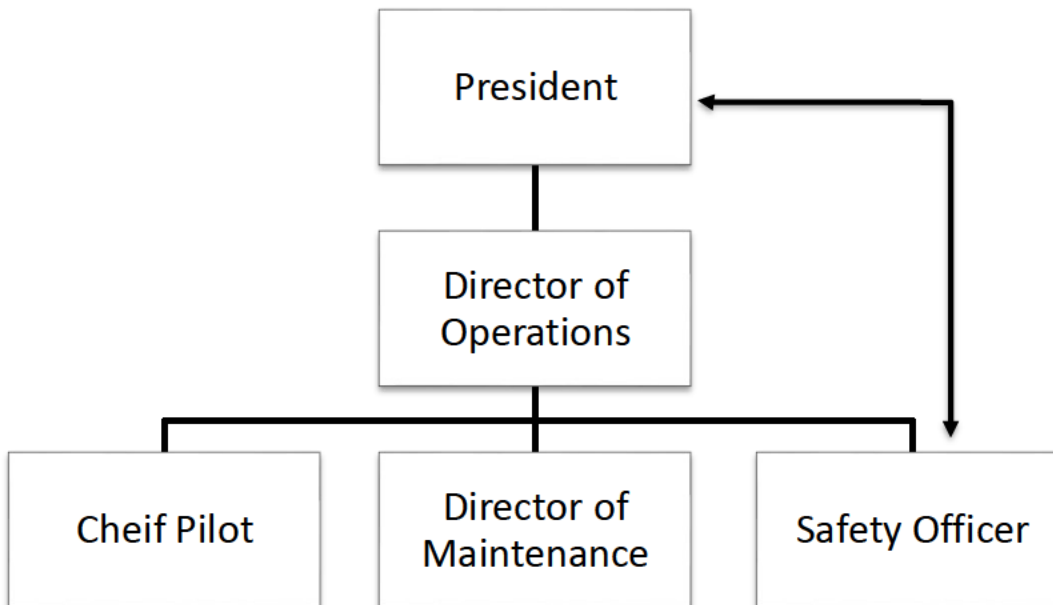
Meetings will be held monthly or more often, if deemed necessary by the chairman. The chairman shall ensure an agenda is prepared and distributed to committee members in advance of the meeting. Minutes of each meeting will be prepared by the Safety Officer and made available to all employees.

2.7.7 Orbic Air Corporate Safety Organization

The senior safety official of Orbic Air, known as the Safety Officer, reports directly to the President in all matters regarding safety. Even though the Safety Officer, as a pilot or mechanic, may hold a full time position under another department head, the safety reporting chain is not affected by the company's management structure. This arrangement is to prevent subtle pressure from affecting safety's judgment in discovering, reporting, investigating, and resolving safety related issues.

2.7.7.1 Corporate Safety Organizational Chart

The Orbic Air corporate safety organizational chart is depicted below:



2.8 Documentation

Pertaining specifically to SMS requirements, Orbic Air will maintain all required SMS information, in paper or electronic form, to contain:

- a. Orbic Air Safety Management Manual;
- b. Safety goals and objectives;
- c. Reported hazards;
- d. Company risk exposure;
- e. Audit performance (internal and external);
- f. Corrective actions;
- g. Change management actions;
- h. Holistic SMS performance; and
- i. Safety Committee meeting activities (agendas, minutes, resulting actions, etc.);

Records of the following SRM outputs will be retained as long as the controls remain relevant to the operation:

- a. Identified hazards or no hazard risk assessment;
- b. Associated risks with identified hazards as applicable;
- c. Analysis for each risk, as applicable; and
- d. New risk controls approved to mitigate unacceptable risks as applicable.

All documentation and/or records, either in paper or electronic form, shall be legible, dated (with dates of revisions), readily identifiable, maintained in an orderly manner, and retained for a specified period as determined by Orbic Air (and in accordance with regulatory oversight organization requirements). The current versions of relevant documents will be made available at all locations where operations essential to the effective functioning of the SMS are performed and obsolete documents and/or records will be promptly removed from all points of use or otherwise assured against unintended use. Safety Assurance outputs must be maintained for a minimum of 5 years.

2.9 List of Periodic Requirements

The following table is provided to list the specific periodic requirements contained in this manual. These requirements are subject to review and modification, as deemed necessary by company managers.

Requirement	Frequency	Responsible Party(s)	Provided For	Reference
SMS Manual review	Annual	Safety Officer	Company President and Senior Management	SMS Manual 2.1 and 2.7.2a
Safety Policy Statement review and update	Annual	Senior Management and Safety Officer	Company President	SMS Manual 2.1; 2.7.2b; 2.7.3a; 2.7.5a
Safety Policy sign and promulgate	Annual	Company President and Safety Officer	All personnel	SMS Manual 2.1
Revise and update Safety goals and Objectives	Annual	Safety Officer, Senior Management, and the Company President	Company President	SMS Manual 2.1; 2.7.1bi and 2.7.2c

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SAFETY MANAGEMENT POLICY

Safety Committee meetings	Monthly	Safety Officer – the safety committee chairman	SMS Library	SMS Manual 2.7.6.3
Conduct ERP drill	Annual	Safety Officer	Employees	SMS Manual 2.6; 2.7.2d; 2.7.3c; 2.7.4b; and 2.7.5.2g
Review new risk assessments	Quarterly	Company President	SMS Library	SMS Manual 3.2
Maintain and update Change List	Monthly	Safety Officer, Senior Management, and the Safety Committee	SMS Library	SMS Manual 3.2.1; 2.7.2g; 2.7.3c; 2.7.4c; and 2.7.5.c
Review Company Risk Profile	Annually or after an update	Company President	SMS Library	SMS Manual 3.7g and 2.7.1e
Maintain the Company Risk Profile	Quarterly	Safety Officer	SMS Library	SMS Manual 3.7 and 2.7.2h
Review and update FRAT report forms	Quarterly	Director of Operations	SMS Library	SMS Manual 3.8.1.1b
Conduct Internal evaluation checklist	Monthly	As assigned by the Director of Operations	SMS Library	SMS Manual 4.3.3
Develop Safety Performance Targets (SPTs) and Indicators (SPIs)	Annual	Safety Officer and Senior Management	Company President	SMS Manual 4.4.1a; 2.7.2e; 2.7.3e; 2.7.4d; and 2.7.5e.
Safety Performance Report	Quarterly	Safety Officer	Company President	SMS Manual 4.4.1e
Safety Performance Report	Semi-annual	Safety Officer	Publication to all organization personnel	SMS Manual 4.4.1f
Conduct Safety Survey	Annual	Safety Officer	Company President and Senior Management	SMS Manual 4.5.1
SMS management review	Annual	Company President	Safety Officer and Senior Management	SMS Manual 4.5
Safety training program review	Annual	Safety Officer	All personnel	SMS Manual 5.1
SMS training	Annual	Safety Officer	All personnel	SMS Manual 5.1 series
SMS communication meeting	Annual	Safety Officer	All personnel	SMS Manual 5.2.1c

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3 Safety Risk Management

A hazard is a condition, event, or circumstance that could lead to or contribute to an unplanned or undesired event. Risk is an expression of the impact of an undesired event in terms of event severity and event likelihood. Throughout the risk management process, hazards are identified, risks analyzed, assessed, prioritized, and results documented for decision-making. The continuous improvement loop process provides for validation of decisions and evaluation for desired results and/or the need for further action.

Safety risk management (SRM) at Orbic Air is comprised of the following focus areas:

- a. System and task analysis;
- b. Change management;
- c. Hazard identification;
- d. Hazard and Event reporting; and
- e. Safety Risk Management.

As a general statement, it is important that the SRM process be continually applied to all phases of operation at Orbic Air to include the initial designs of systems, organizations, and/or products and to the development of operational procedures.

Using various techniques described in this section, Orbic Air has defined acceptable and unacceptable levels of safety risk. Descriptions have been established for severity and likelihood levels (described in the Safety Risk Management Procedures section of chapter 3 of this manual), to include authority for safety risk acceptance decisions. These risk decisions may apply in the short-term while safety risk controls/mitigation plans are developed and executed.

Note: The SRM process shall not preclude Orbic Air employees from taking interim immediate action to eliminate or mitigate existing safety risk when and where it is recognized that urgent action is required.

3.1 System and Task Analysis

Safety risk management must examine system design. That means looking at what we do and how we do it. System and task evaluations shall be proactively carried out to the level of detail necessary to identify hazards present at Orbic Air.

Whether it is a physical system such as an aircraft or an operational system such as scheduling, flying, or maintaining aircraft, it needs to be analyzed. A system or task description should completely explain the interactions among the hardware, software, liveware and environment that make up the system in sufficient detail to identify hazards and perform risk analysis. System and task analysis at Orbic Air will consider the following, at a minimum:

- a. Function and purpose of the system;
- b. Operational environment;
- c. An outline of the system's processes and procedures; and
- d. The personnel, equipment, and facilities necessary for the operation of the system.
- e. Any interactions with other systems in the air transportation system (e.g., airports, air traffic control);
- f. The functional components described in the Scope of the Safety Management System section in chapter 1 of this manual;
- g. Employee tasks required to accomplish the functional components in the Scope of Safety Management System section of chapter 1 of this manual;
- h. Required human factors considerations of the system (e.g., cognitive, ergonomic, environmental, occupational health and safety) for operations and maintenance;

- i. Hardware components of the system;
- j. Software components of the system;
- k. Related procedures that define guidance for the operation and use of the system;
- l. Training requirements (existing and potential);
- m. Ambient environment;
- n. Maintenance environment;
- o. Contracted and purchased products and services;
- p. The interactions between items or issues defined in the list above;
- q. Any assumptions made about the systems, system interactions, and existing safety risk controls/mitigation;

Orbic Air management required action:

Each responsible manager is required to continually evaluate the systems and processes under their cognizance, measure performance, identify hazards, and assess related risk. Examining the probable threats and areas of common errors in these systems and processes will provide increased clarity into the hazards affecting Orbic Air.

The System and Task Analysis may be completed using the Hazard and Event Analysis and Processing Procedures or the Enhanced Risk Assessment Process sections of this chapter.

The results of the analysis performed by responsible managers, whether done independently or in conjunction with other SMS activities, will be documented in the respective files or PRISM/ARMOR tool, with a copy provided to the Safety Officer for SMS documentation.

3.2 Management of Change/Change Management in Terms of Risk

Aviation organizations can experience permanent change due to expansion, contraction, changes to existing systems, equipment, programs, products and services, and introduction of procedures. Hazards and the impact to employee health and the environment may inadvertently be introduced into an operation whenever change occurs. Safety management practices require that hazards that are a by-product of change be systematically and proactively identified and those strategies to manage the safety risks of the consequences of hazards be developed, implemented, and subsequently evaluated.

The following items **shall not** be fully implemented at Orbic Air until the associated risks of each change is determined to be acceptable using the risk assessment procedures contained in this manual:

- a. New system designs;
- b. Changes to existing system designs;
- c. New operations/procedures and training programs;
- d. Modified operations/procedures and training programs;
- e. Changes in key/supervisory personnel.

This determination will be done via a formal Safety Risk Management (SRM) Process that will be initiated and documented by the Safety Officer, with participation from applicable subject matter experts. The Safety Committee will review all formal risk assessments and forward to the functional manager for approval. All formal risk assessments will be reviewed quarterly by the Company President. The formal risk assessment may be completed using the Enhanced Risk Assessment Process in this chapter.

The implementation of new processes/procedures as well as any changes to the same will be appropriately communicated to affected personnel and adequate training provided to help ensure safety performance.

3.2.1 Example Change List

Orbic Air will keep track of its organizational changes using a running Change List and a reference to the SRM process performed on each Hazard associated with the change. The Safety Officer is responsible for maintain the Change List.

Running Change List for SMS								
Last Updated Dec 31, 20XX								
Change Number (YYYYMMXX)	Description of Change	Why This Change is Being Implemented	Stakeholders in this Change	Hazards related to this change	Date added or modified on this list	Date of Risk Assessment in the RAT	Risk Assessment approved by whom?	Notes
20181201	New VFR Standard routes in and out of Class D	ATC indicates this will reduce noise pollution.	The Control Tower, all flying organizations that may use this airfield and the surrounding community.	Flight violation	12/11/18	12/11/2018	John Smith, Title	
		same as above		Midair collision	12/11/18	12/11/2018	John Smith, Title	
20181202	Selling an aircraft	The Aircraft no longer meets the organization's mission needs.	Everyone in our organization and the buyer.	Parts and fluids for this aircraft may get used in the wrong aircraft if they are not disposed of when the aircraft leaves	12/11/18	12/11/2018	John Smith, Title	

3.3 Hazard Identification

Identify Hazards and Consequences: Potential hazards may be identified from a number of internal and external sources. Sources may include: Accidents, incidents, adverse events, non-conformances, deviations, or hazards. Hazard scenarios may address the following: who, what, where, when, why, and how, regarding the hazard that is causing concern, as well as its potential consequences. This provides an intermediate product that expresses the condition and the consequences that will be used during risk analysis. Additional information regarding accidents and incidents can be found in section 6 of this manual

Hazards shall be identified for the entire scope of the system that is being evaluated, as defined in the system description, and documented using the hazard reporting form. Once a hazard has been identified and documented, the information shall be tracked and managed as described in the procedures following.

3.3.1 Hazard Identification Requirements and Procedures

To formalize the hazard identification process, the following requirements are established for Orbic Air:

- System and Task hazards as described in section 3.1 will be proactively identified and communicated through SMS activities by all managers;
- All employees are responsible for continued vigilance to identify hazards they observe or experience via the performance of their duties at Orbic Air;
- The Safety Officer is responsible for collecting submitted reports and maintaining hazard information so as to facilitate analysis and trending;
- Applicable subject matter experts at Orbic Air will be involved in analyzing identified hazards at the direction of the Safety Officer;
- The Safety Officer shall use all available resources to monitor common industry hazards and evaluate the potential exposure of Orbic Air to these hazards. This evaluation shall be recorded as a submission into the Orbic Air hazard reporting program using the existing hazard report form for tracking, corrective action assignment, and documentation.

3.4 Hazard and Event Reporting

From a reporting perspective, a hazard is anything that, in the eyes of the employee or customer, threatens the safety of people or resources of Orbic Air. When hazards and events are reported, safety is enhanced. All employees of Orbic Air are charged with the responsibility to report any hazard they observe, experience, or define as a near miss using the reporting method described in this manual. Additionally, a duplicate report can be submitted via the NASA Aviation Safety Reporting System (ASRS) for flight oriented reports, as applicable. Employees may submit reports anonymously but are encouraged to include their name on submitted reports to allow for follow-up questions and feedback. The type of safety data to be collected may include accidents, incidents, adverse events, non-conformances, deviations, or hazards.

Employees are charged with bringing unsafe or unhealthy, or adverse environmental conditions to management for resolution via the Orbic Air hazard and event reporting program. If these hazards are identified to managers in any other way, they are then required to evaluate the need for a hazard report submission, and to subsequently submit the report on behalf of the employee. ***No reprisal or discriminatory actions will be brought against any employee who communicates these observations.*** Orbic Air fosters a philosophy of “Just Culture”; a fair environment in which hazard reporting is deemed vital to a robust SMS.

Any reported event or near miss that has the reasonable appearance of criminal activity, substance abuse (controlled or uncontrolled), or willful negligence will be investigated outside of safety purview and handled according to law and company policy. If the report is determined to not involve any of these activities, it will be referred back to the Safety Officer for safety investigation.

3.4.1 Hazard and Event Reporting Procedures

To formalize hazard and event reporting, the following requirements are established for Orbic Air:

- a. Reports may be submitted online or via paper using the hazard reporting forms contained in the Forms Chapter of this manual.
- b. Reports submitted on paper will be entered in to the Orbic Air hazard tracking record by the Safety Officer. The original paper report will be kept on file in the Orbic Air safety records.
- c. Reports should be clear, concise, and contain all necessary detail.
- d. Reports may be submitted anonymously, but employees are encouraged to include their name on submitted reports to allow for follow-up questions and feedback.
- e. The Safety Officer shall ensure paper hazard report forms and electronic reporting access are available to all applicable employees.
- f. Reported hazards will be evaluated by the Safety Officer or a designated representative within 72 hours. For reports of a severe nature, it is expected that employees will notify managers that immediate action may be required.
- g. If the report contains the submitter's name, the Safety Officer shall notify the submitter at the earliest practical opportunity that the report has been received and is being evaluated.
- h. Scope of aviation sectors/ areas covered by the system:
 - i. Flight Operations
 - ii. Hangar Aircraft Maintenance:
 - iii. Technical Fleet Management
 - iv. Inventory Technical Management
 - v. Technical Services
 - vi. Technical Records
 - vii. Line Maintenance

3.4.2 Online Hazard and Event Reporting

Anonymous online hazard and event reporting using the PRISM SMS Tools website Hazard and Event Reporting Tool (Reporting Program Tracker) is the preferred reporting method for Orbic Air.

1. All appropriate hazard and event reporting documentation will be accessible via [REDACTED] (a sample form is located in Chapter 7 of this manual. Paper copies should be printed from the website as backup)
2. Orbic Air employees will have a unique and individual login to access these forms from a computer or utilizing the available PRISM/ARMOR mobile device Apps. Their login credential will be their email address on file with Orbic Air and the password will be assigned via email.
3. The reporting tools are located on the PRISM SMS website in the ARMOR Menu and selecting "Submit a Safety Report/Other Report."
4. Hazard and event reports submitted via the online hazard and event reporting system will be automatically routed to the safety manager for the corrective action and approval process.
5. Online hazard and event reporting allows Orbic Air employees to report actual and perceived hazards 24/7 from any location.
6. Detailed processes are located on the PRISM/ARMOR website under Training – PRISM website Training

3.5 Safety Risk Management Procedures

A Safety Risk Management Procedure will be used to assess and analyze hazards, events, and system analysis to establish relevance to Orbic Air. The objectives of this Risk Management Procedure are to determine:

- a. What additional information is needed (if any);
- b. Ascertain factors underlying safety deficiencies; and
- c. Reach valid conclusions.

These analyses are expected to apply both quantitative and qualitative analytics.

To formalize hazard and event analysis and processing, the following requirements are established for Orbic Air:

- a. The Safety Officer is responsible for maintaining all documentation related to analysis.
- b. The Safety Officer may assign other employees to assist in the analysis or be completely responsible for the analysis.
- c. The Safety Committee will review all completed hazard and event analysis.

Safety risk management is a generic term that encompasses the assessment and mitigation of the safety risks linked to the consequences of hazards that threaten the capabilities of an organization, to a level as low as reasonably practicable (ALARP). The objective of safety risk management at Orbic Air is to provide the foundation for a balanced allocation of resources between all assessed safety risks and those safety risks for which control, and mitigation are viable. In other words, safety risk management assists in resolving the dilemma of balancing protection and production. Safety risk management is therefore the core component of the Safety Management System. Its added value, however, lies in the fact that it is a data driven approach to resource allocation, thus defensible and easier to explain/quantify.

SAFETY RISK MANAGEMENT

The significant concepts regarding safety risk management discussed throughout this section can be summarized as follows:

- a. There is no such thing as absolute safety – in aviation it is not possible to eliminate all safety risks.
- b. Safety risks must be managed to a level “as low as reasonably practicable” (ALARP).
- c. Safety risk mitigation must be balanced against:
 - i. time;
 - ii. cost; and
 - iii. the difficulty of taking measures to reduce or eliminate the safety risk (i.e., managed).

Effective safety risk management seeks to maximize the benefits of accepting a safety risk (most frequently, a reduction in either time and/or cost in the delivery of the service) while minimizing the safety risk itself. The rationale for safety risk decisions must be communicated to the stakeholders affected by them, to gain their acceptance.

A key part of the safety risk management process is the involvement of the Orbic Air employees who will be affected by a decision; their expertise is often critical to decision making and corrective action plans. There are significant benefits to using this decision process to deal with risk issues including:

- a. Avoiding costly losses in the decision making process;
- b. Ensuring that all aspects of the risk problem are identified and considered when making decisions;
- c. Ensuring that the legitimate interests of all affected stakeholders are considered;
- d. Providing the decision makers with a solid defense in support of decisions;
- e. Making decisions easier to explain;
- f. Providing a standardized set of terminology used to describe risk issues contributing to better communication about risk issues; and
- g. Providing significant savings in time and money.

The safety risk management process at Orbic Air shall include a review of any existing safety risk controls, such as written policies, checklists, and standard operating procedures (SOP). This review will be conducted via an ongoing internal evaluation program. Special emphasis reviews may be required if circumstances dictate.

To formalize risk management, the following requirements are established for Orbic Air:

- a. The Safety Officer is responsible for collecting and maintaining all documentation related to risk management at Orbic Air. This documentation shall be maintained in the safety library in a secure and orderly manner;
- b. The Safety Officer shall review all identified hazards and determine if a risk assessment is required;
- c. Both electronic and paper documentation of the risk assessment is acceptable for inclusion into Orbic Air's safety library;
- d. Specific limited access to hazard reporting documentation is determined by Safety Officer on a case-by-case basis;
- e. The Safety Officer will coordinate with Safety Committee members to assign risk assessments to individuals or teams;
- f. The Safety Officer is responsible for tracking risk assessments to completion. This includes monitoring employed controls and measuring their effectiveness in risk management terms;
- g. The Safety Officer has full authority to initiate a special emphasis risk assessment based on emerging circumstances;

3.5.1 The Safety Risk Management (SRM) Process Steps

Safety risk management and assessment utilizes the following steps:

- a. Conduct an investigation and identify the hazard
- b. Identify the negative consequence(s) of the hazard;
- c. Identify the root cause(s) of the hazard
- d. Assess the initial risk level using a risk matrix;
- e. Develop risk controls and corrective actions;
- f. Assess residual risk level using a risk matrix;
- g. Implement risk controls;
- h. Provide feedback to report submitters and personnel affected by the control measures; and
- i. Complete risk control assurance check.

3.5.2 Hazard Consequences

The hazard and its negative consequences must be identified and documented to start the risk management process.

Negative consequences may be documented using the PRISM/ARMOR Reporting Program and Risk Assessment online tools. See Online Safety Risk Management Process at the end of this section.

3.5.3 Root Cause Analysis

Root Cause Analysis will be completed on all hazards, incidents, and accidents, to determine all Root and Contributing causes.

Root Cause Analysis can be documented using the PRISM SMS Tools Reporting Program Tracker and Risk Assessment online tools. See Online Safety Risk Management Process at the end of this section.

3.5.4 Risk Level Assessment

3.5.4.1 Safety Risk Probability

Safety risk probability is defined as the likelihood that an unsafe event or condition might occur during operations at Orbic Air. This probability of occurrence is based on analysis considering the following:

- a. Is there a history of similar occurrences to the one under consideration, or is this an isolated occurrence? Occurrences at Orbic Air and across aviation will be considered, as applicable.
- b. What other equipment or components of the same type might have similar defects?
- c. How many personnel are following, or are subject to, the procedures in question?
- d. What percentage of the time is the suspect equipment or the questionable procedure in use?

In assessing the likelihood of the probability that an unsafe event or condition might occur, reference to historical data contained in the safety documentation of Orbic Air is paramount in order to make informed decisions. It follows that an organization which does not maintain and utilize safety documentation can only make probability assessments based, at best, on industry trends and, at worst, on opinion.

The following taxonomy shall be used at Orbic Air to standardize the assignment of probability:

Probability	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely Improbable	Almost inconceivable that the event will occur	1

3.5.4.2 Safety Risk Severity

Safety risk severity is defined as the possible consequences of an unsafe event or condition, taking as reference the worst foreseeable situation. The assessment of the severity of the consequences of the hazard if its damaging potential materializes during operations can be determined by answering questions such as:

- a. How many lives may be lost (employees, passengers, bystanders, and the general public)?
- b. What is the likely extent of property or financial damage (direct property loss to the operator, damage to aviation infrastructure, third-party collateral damage)?
- c. What is the likelihood of environmental impact (spillage of fuel or other hazardous product, and physical disruption of the natural habitat)?
- d. What are the likely political implications and/or media interest?

Based on the considerations related to the risks impacting operations at Orbic Air, the severity of the possible consequences of an event or condition, taking as reference the worst foreseeable situation, can be assessed using the following safety risk severity table.

The following taxonomy shall be used at Orbic Air to standardize the assignment of severity:

Severity	Meaning	Value
Catastrophic	– Equipment destroyed – Fatal injury – Property loss greater than \$1 million	A
Critical	– A large reduction in safety margins, physical distress, or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely – Serious injury resulting in disability – Major equipment damage – Property loss greater than \$100k	B
Major	– A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency – Serious incident – Injury resulting in lost work time – Property loss greater than \$10k	C
Minor	– Nuisance – Injury resulting in no lost work time – Use of emergency procedures – Minor incident	D
Negligible	– Little consequences	E

3.5.4.3 Safety Risk Tolerance

Once the safety risk of the consequences of an unsafe event or condition has been assessed in terms of probability and severity, the third step in the process of bringing the safety risks of the consequences of the unsafe event or condition under organizational control is the assessment of the tolerability of the consequences of the hazard if its damaging potential materializes during operations at Orbic Air. This is known as assessing safety risk tolerability.

This is a two-step process. First, it is necessary to obtain an overall assessment of the safety risk. This is achieved by combining the safety risk probability and safety risk severity tables into a safety risk assessment matrix. This risk matrix for Orbic Air is depicted in section 3.5.4.4.

Second, the safety risk index obtained from the safety risk assessment matrix must then be exported to a safety risk tolerability decision matrix that describes the tolerability criteria (depicted in section 3.5.4.5). The defined criteria for Orbic Air are listed in the tolerability matrix and shall be adhered to without exception. In the event the Company President is not available, decision making authority is delegated to the Director of Operations, Director of Maintenance, and Chief Pilot, in the order listed.

3.5.4.4 Orbic Air Risk Assessment Matrix

PROBABILITY	SEVERITY				
	A Catastrophic	B Critical	C Major	D Minor	E Negligible
5 Frequent	5A	5B	5C	5D	5E
4 Occasional	4A	4B	4C	4D	4E
3 Remote	3A	3B	3C	3D	3E
2 Improbable	2A	2B	2C	2D	2E
1 Extremely Improbable	1A	1B	1C	1D	1E

3.5.4.5 Orbic Air Risk Tolerability Decision Matrix

COLOR ZONE	RISK LEVEL	SCORE	DECISION REQUIREMENTS
Red	High	5A, 5B, 5C, 4A, 4B	Unacceptable under the existing circumstances. The action or event must not be undertaken. Imperative that risk be reduced if action or event is to proceed.
Yellow	Medium	5D, 5E, 4C, 3B, 3A, 2A	The action or event may only proceed with the approval of the Company President. This may be a standing approval if associated with a previous risk assessment.
Green	Low	4D, 4E, 3C, 3D, 3E, 2B, 2C, 1A, 1B	The action or event may only proceed with the approval of management if there is no standing policy or procedure containing existing controls for this action or event.
Blue	Negligible	2D, 2E, 1C, 1D, 1E	The action or event is always acceptable.

3.5.4.6 Online Risk Level Assessment

Risk level assessment may be completed using the PRISM/ARMOR Reporting Program and Risk Assessment online tools. See Online Safety Risk Management Process at the end of this section.

3.5.5 Enhanced Risk Assessment Process

The Enhanced Risk Assessment Process is basically the Safety Risk Management (SRM) Process expanded to include the ability to assess complex Hazards or Events, System and Task Analysis, and hazards identified as part of the organization's Management of Change process.

Multiple areas can be assessed, each using the Safety Risk Management Process steps including Root Cause Assessment, Initial and Residual Risk Severity, Corrective Action, and Safety Assurance.

The Enhanced Risk Assessment process can be completed using the PRISM SMS Risk Assessment Tool (RAT). The RAT provides a way to perform the SRM Process on multiple negative consequences stemming from the same hazard. See Online Safety Risk Management Process at the end of this section.

3.5.6 Risk Control and Mitigation

While the risks inherent throughout Orbic Air will be continually assessed, experts within Orbic Air can implement one or more risk control measures designed to reduce or eliminate the assessed risk.

The process of bringing the safety risks of the consequences of an unsafe event or condition under organizational control, control/mitigation strategies must be deployed.

There are three general strategies for safety risk control/mitigation:

1. **Elimination.** The operation or activity is cancelled because safety risks exceed the benefits of continuing the operation or activity. An example of an elimination strategy:
 - i. Operation into an airport surrounded by complex geography is cancelled.
2. **Mitigation.** The frequency of the operation or activity is reduced, or action is taken to reduce the magnitude of the consequences of the accepted risks. An example of a mitigation strategy:
 - i. Operation into an airport surrounded by complex geography is limited to daytime, visual conditions.
3. **Residual risk exposure.** Action is taken to isolate the effects of the consequences of the hazard or build in redundancy to protect against them via mitigation. The remaining risk is evaluated and determined to be acceptable or requiring additional mitigation. An example of a strategy based on residual risk exposure:
 - i. Operation into an airport surrounded by complex geography is limited to aircraft with specific performance navigation capabilities and flight crews with specific experience in addition to daytime, visual conditions limitations.

A risk strategy shall be defined for each identified hazard with unacceptable risk as defined by the Orbic Air risk matrix, or in other situations as determined by the Company President. If the status of a risk should change or the mitigating action does not produce the intended effect, a determination must be made as to what modifications may be necessary. Safety risk controls shall be clearly described and evaluated to ensure that the risk reduction requirements have been met and are ready to be used in the operational environment for which they are intended.

Residual risk shall be evaluated after creation of safety risk controls/mitigations. This secondary evaluation may determine employed controls are not adequate. In this circumstance, additional controls or modification is necessary to bring the risk to an acceptable level for Orbic Air.

Risk controls and mitigations may be completed using the PRISM/ARMOR Reporting Program and Risk Assessment online tools. See Online Safety Risk Management Process at the end of this section.

3.5.7 Feedback of Control and Mitigation

Feedback will be provided to report submitters and personnel affected by the control measures. Submitters will be informed that their report has been reviewed and what action was taken to address it.

Feedback be completed using the Publication feature of the PRISM/ARMOR Reporting Program online tool. See Online Safety Risk Management Process at the end of this section.

3.5.8 Risk Control Assurance Check

Risk Control assurance checks will be completed to ensure the risk control (corrective action) is effective. An assurance check will be performed approximately 90-120 days after a hazard and event report is closed to verify the hazard status and effectiveness of the implemented corrective action. If the control or hazard is not effective, it will be assessed, and additional controls applied. This assurance check may be delegated for completion at the discretion of the Safety Officer.

Assurance checks may be completed using the PRISM/ARMOR SMS website Reporting Program Tracker and Risk Assessment Tool. See Online Safety Risk Management Process at the end of this section.

3.5.9 Example of Safety Risk Management

A new construction project at a frequent destination airport is announced. Refer the following steps:

- Step 1 – Identify the generic hazard- Ground handling/flight crew.
 - Step 2 – Identify specific hazards of the generic hazard- construction equipment and aircraft collision, closed runways and taxiways leading to incursion, etc.
 - Step 3 – Determine root cause- crew confusion, no communication with construction crews, etc.
 - Step 4 – Link specific hazards to specific consequences- aircraft colliding with construction equipment, runway incursion, etc.
- a. A corrective action assignment will result from the hazard analysis. Employees perceived to have the best opportunity to develop and implement a corrective action that will remedy exposure to the hazard and thereby reduce the risk will be assigned by the Safety Officer or another manager.
 - b. The Safety Officer will review all corrective actions, verify application, and evaluate any risk remaining (residual risk) after the corrective action is taken.
 - c. The hazard and event report can be closed after the analysis and corrective action is complete.
 - d. An assurance check will be performed to verify the hazard status and effectiveness of the implemented corrective action.

3.5.10 Online Safety Risk Management (SRM) Process

The Safety Risk Management (SRM) Process may be accomplished within three of the Tools of the PRISM/ARMOR SMS website:

- Within a Report submitted via the Reporting Program Tracker (RPT)
 - Within a Finding on a checklist within the Internal Evaluation Manager (IEP), and
 - Within a Risk Assessment (RA) in the Risk Assessment Tool (RAT).
1. All appropriate Risk Management Processes will be accessible via [REDACTED]
 2. Orbic Air management personnel will each have a unique and individual login to access these processes from an internet browser. Their login credentials will be their email address on file with Orbic Air and the password they set up from an email link triggered to them by the account administrator.
 3. The tools wherein the Risk Management process can be conducted are located on the PRISM/ARMOR website in the ARMOR Menu:
 - a. Reporting Program Tracker,
 - b. IEP Manager, and
 - c. Risk Assessment Tool.
 4. Under the ARMOR menu there is also a tool labeled "Classic Dashboard", which is where upcoming and overdue items related to the SRM Process are visible. The listed items can be actioned directly from links within their primary tool or from within the classic Dashboard.
 5. Detailed information is located on the PRISM/ARMOR website under the Training menu and then select PRISM Website Training

3.6 Risk Management Documentation Procedures

To formalize risk management documentation, the following requirements are established for Orbic Air:

- a. The Safety Officer is responsible for all risk assessment documentation.
- b. The Safety Officer is granted authority to assign risk assessments and control strategies to other Orbic Air employees, to include managers.
- c. To ensure standardized procedures, shall use a Risk Assessment Form. This form may be paper or electronic format. The online risk assessment tools on the PRISM/ARMOR website are also authorized for use.
- d. This form must be filled out in entirety for each risk assessment performed and must contain all of the required analysis and follow-up. Attach files via paper or electronically to support the risk assessment.
- e. Employed controls shall be monitored using the risk assessment form as a documentation tracker.
- f. Risk assessment forms shall be maintained indefinitely in the Orbic Air safety library.

3.7 Company Risk Profile

Capturing the prominent risks faced by Orbic Air and evaluating the controls employed to eliminate or mitigate those risks is the objective of the company risk profile. The company risk profile helps to form the focus of formal risk management. Described as a “map that charts the contours of higher risk,” a risk profile should heighten awareness, direct resource allocation, and improve SMS focus. Both internal and external information should be used to evaluate and update the company safety risk profile. The form used to construct the company risk profile is contained in the Forms section of this manual or online within the PRISM SMS Company Risk Profile Tool.

To formalize company risk profile development and documentation, the following requirements are established for Orbic Air:

- a. The company risk profile will be used to document and track prominent risk exposure faced by Orbic Air. This documentation may be paper or electronic.
- b. The risk zones evaluated at Orbic Air are Aircraft Operations, Aircraft Maintenance, Facilities, and Human Factors. Every risk assessment performed will be placed into one of these four zones.
- c. Each zone in the profile is divided into risk areas. These areas will describe the highest level of risk at Orbic Air based on the exposure in that area.
- d. The “Status” column will indicate complete or incomplete risk assessment for the specific details listed. If the risk assessment is complete for a specific detail listed, the mitigation or elimination employed shall be referenced here.
- e. The profile will be updated quarterly after Safety Committee review, or at other more frequent intervals as risks emerge.
- f. The Safety Officer is responsible for maintaining the Orbic Air Company Risk Profile.
- g. The Company President will review the profile at least annually, or after an update.
- h. The historical and current profiles will be maintained in the safety library.
- i. The company training programs, and Ops Manuals should be regularly updated based upon critical issues identified in the safety risk profile.

3.7.1.1 Example Company Risk Profile

[Company Name] Risk Profile			6/2/2009
RISK AREA	RISK EXPOSURE (VERY HIGH, HIGH, MEDIUM, LOW)	SPECIFIC DETAILS	STATUS
Aircraft Operations			
Departure	High	The XYZ departure has an high instance of clearance deviation. This often results in violations, and NMAC/TCAS alerts at his airfield. Our company pilots must perform this specific departure in the simulator twice each year to be assigned PIC duties at this airport.	Risk assessment complete
Arrival	Choose an item.		Choose an item.
En-route	Choose an item.		Choose an item.
Ground movement	Very High	Our home base airport has a high instance of taxiway lighting problems that create confusion when taxiing during darkness hours. We are working with the airfield manager to resolve. All pilots are constantly briefed and kept aware.	Risk assessment incomplete

3.8 Flight and Ground Risk Analysis Program

Every flight and ground evolution conducted by Orbic Air has potential hazards and some level of risk associated with it. It is critical that appropriate management, pilots, and ground personnel are able to differentiate, in advance, between a low risk and a high risk using a risk assessment tool that allows personnel to see the risk profile of a flight or ground evolution in its planning stages. The Orbic Air will determine an acceptable level of risk for its events based on the type of operation, environment, equipment used, personnel training, and overall operating experience. When the risk for an event exceeds the defined acceptable level for Orbic Air (referred to as “elevated”), the event will be further evaluated, and risk decisions will be made by appropriate Orbic Air leadership.

A flight and ground risk analysis tool will be developed using the resources provided in the PRISM/ARMOR SMS website. When developing the Orbic Air flight and ground risk analysis templates it is important to understand that risk has several elements that must be considered, including probability, severity, and weighted value. What is the probability of a particular event occurring? If the event does occur, what is the severity likely to be? And what is the weighted value of this type of event compared to other aspects of the operation? In the Orbic Air risk assessment tool, this evaluation has been completed, including the addition of items that are unique to the Orbic Air operation.

Using this tool (FRAT or GRAT) to create numerical thresholds will trigger additional levels of evaluation to ascertain the risk associated with each event. These thresholds should be created to help ensure that the safety standards/goals of Orbic Air are maintained. It is important that realistic thresholds are created. If every event is within the acceptable range under any condition, it is likely that the thresholds have not been set correctly. In addition, personnel could lose confidence in the process. Periodically evaluating the trends identified in completed flight and ground risk analyses can recognize high risk exposure and training targets for Orbic Air.

3.8.1 Flight and Ground Risk Analysis Procedures and Documentation

The following requirements are established for Orbic Air:

- a. Flight and ground risk analysis forms will be used to document and track prominent risk exposure faced by Orbic Air as specifically pertaining to individual events. This documentation may be paper or electronic.
- b. The construct of the forms will define two distinct elevated risk thresholds: Warning and Critical. These thresholds have specific decision requirements as defined below.
- c. Historical risk trends derived from flight or ground risk analysis forms shall be calculated and evaluated to help determine training strategies for Orbic Air and for updating the Company Risk Profile, as described in prior sections of this manual.
- d. The historical and current risk analysis reports will be maintained in the safety library, as determined by the Director of Operations and Director of Maintenance. The form will not be maintained as part of this manual, as it is subject to frequent changes.

3.8.1.1 Flight Risk Analysis

- a. The Director of Operations is responsible for the drafting and standardization of the Orbic Air flight risk analysis forms. Only risk analysis forms validated by the Director of Operations will be utilized by Orbic Air. The forms shall be subject to revision control to ensure standardization.
- b. It is expected that the flight risk analysis forms will require modification. The forms shall be reviewed by the Director of Operations quarterly, or at other more frequent intervals as risks emerge, to ensure its effectiveness. When changes are made the Director of Operations shall ensure the correct form version is utilized throughout Orbic Air.
- c. *The pilot will complete a flight risk analysis form before each flight.*
- d. When a specific flight risk analysis yields a result that eclipses the elevated risk point Warning threshold, the Chief Pilot or Director of Operations shall be informed, and concurrence required for the flight to proceed without risk mitigation controls lowering the analysis score.
- e. When a specific flight risk analysis yields a result that eclipses the elevated risk point Critical threshold, the Director of Operations shall be informed, and concurrence required for the flight to proceed without risk mitigation controls lowering the analysis score.

3.8.1.2 Ground Risk Analysis

- a. The Director of Maintenance is responsible for the drafting and standardization of the Orbic Air ground risk analysis forms. Only risk analysis forms validated by the Director of Maintenance will be utilized by Orbic Air. The forms shall be subject to revision control to ensure standardization.
- b. It is expected that the ground risk analysis forms will require modification. The forms shall be reviewed by the Director of Maintenance quarterly, or at other more frequent intervals as risks emerge, to ensure its effectiveness. When changes are made the Director of Maintenance shall ensure the correct form version is utilized throughout Orbic Air.
- c. When a specific ground risk analysis yields a result that eclipses the elevated risk point Warning threshold, the Director of Maintenance or Director of Operations shall be informed, and concurrence required for the event to proceed without risk mitigation controls lowering the analysis score.
- d. When a specific ground risk analysis yields a result that eclipses the elevated risk point Critical threshold, the Director of Maintenance shall be informed, and concurrence required for the event to proceed without risk mitigation controls lowering the analysis score.

3.8.2 Online Flight and Ground Risk Analysis Tool(s)

Online flight and ground risk analysis reporting using the PRISM/ARMOR SMS website FRAT and GRAT is the preferred reporting method for Orbic Air. All appropriate flight and ground risk analysis reporting documentation will be accessible via [REDACTED] (a sample form is located in Chapter 7 of this manual. Paper copies should be printed from the website as backup)

1. Orbic Air employees will have a unique and individual login to access these forms from a computer or utilizing the available PRISM ARMOR mobile device Apps. Their login credential will be their email address on file with Orbic Air and the password they setup from an email link triggered to them by the account administrator.
2. Flight and ground risk analysis reports submitted via the online hazard and event reporting system will be automatically routed to the Director of Operations for the review and approval process, as necessary.
3. Online flight and ground risk analysis reporting allows Orbic Air employees to report actual and perceived hazards 24/7 from any location.
4. Detailed processes are located on the PRISM/ARMOR website under Training – PRISM website Training.

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4 Safety Assurance

Safety management at Orbic Air requires feedback on safety performance to complete the safety management cycle. Through monitoring and feedback, SMS performance can be evaluated and any necessary changes to the Orbic Air system effected. In addition, safety assurance provides stakeholders at Orbic Air an indication of the level of safety performance affected by the Safety Management System.

Safety assurance demands Orbic Air actively monitor systems and processes to continuously identify new hazards, measure the effectiveness of aircraft operations and maintenance, and monitor risk controls that have been implemented in order to ensure compliance with internal and external requirements.

4.1 Assurance Component Description

The safety assurance objectives for Orbic Air are designed using the following principles and include procedures for monitoring the performance of critical aspects of the organization. The safety assurance objectives of Orbic Air shall be comprised of these elements:

- a. monitoring of risk and effected controls;
- b. internal evaluation and external audits;
- c. corrective action requirements;
- d. safety performance analysis; and
- e. management reviews.

4.2 Monitoring of Risk and Effected Controls

Orbic Air shall monitor the effectiveness of implemented risk controls in the manner described in the Risk Control Assurance Check section of chapter 3 of this manual.

4.3 Internal Evaluation Program (IEP) and External Audits

4.3.1 Continuous Monitoring

Orbic Air shall monitor organizational performance utilizing a proactive internal evaluation program designed with the following objectives:

- a. Assess conformity with internal and external requirements;
- b. Measure the effectiveness of safety risk controls;
- c. Monitor products and services received from vendors and contractors;
- d. Assess Orbic Air system and process performance; and
- e. Identify hazards and deficiencies.
- f. Communicate results to senior leadership and company personnel as appropriate.

4.3.2 Internal Evaluation Auditor Selection Criteria

If feasible Orbic Air IEP auditors should have training and/or experience in recognized quality management auditing, systems analysis, root cause analysis, and risk assessment, as well as evaluation principles and techniques. Selecting the auditors is a critical part of creating and sustaining a successful IEP at Orbic Air. Experience, training, and personality are critical qualities in an auditor role. Auditor training can be accomplished in a formal course setting, via OJT with another experienced auditor, or using appropriate distance resources (websites, books, etc.).

To formalize internal evaluation auditor selection procedures and documentation, the following requirements are established for Orbic Air:

- a. The Director of Operations is responsible for selecting and assigning the internal evaluation auditors for each specific evaluation.
- b. The Director of Operations will ensure each auditor has the requisite training and experience to properly conduct the evaluation, to the maximum extent possible.
- c. The auditor assigned shall be documented on the evaluation checklist.
- d. Auditors will not be assigned to independently evaluate their own work product or area of assigned responsibility to prevent conflict of interest bias.
- e. Subject matter experts may assist assigned auditors in the evaluation. This assistance does not relieve the auditor from personally conducting the evaluation. The auditor has the responsibility to identify and document findings.
- f. The Director of Operations shall maintain an updated rolling twelve-month internal evaluation schedule that is available to all Orbic Air managers.

4.3.3 Internal Evaluations

The internal evaluation program is a continuous evaluation process that examines the effectiveness of processes, programs, and procedures integral to each functional area of Orbic Air. It validates the controls that an organization has put into place are working as intended, and risks have been mitigated as low as reasonably practicable (ALARP). Ensure satellite bases (if applicable) have adequate IEP oversight in all locations (requirement of ARGUS Standard).

Checklists should be utilized when required in order to ensure a holistic evaluation of the entire operation. Checklists may be customized to address all applicable areas. Any findings, or deficiencies, discovered during internal evaluations will enter a corrective action process described below. Completed evaluations and corrective actions will be internally documented.

If serious violations of Federal Aviation Regulations (FARs) are uncovered, the Company President will determine if notification to FAA officials for self-disclosure is required.

Internal Evaluations may be completed using the PRISM/ARMOR IEP Manager online tool. See Internal Evaluation Online Process at the end of this section.

To formalize internal evaluation procedures and documentation, the following requirements are established for Orbic Air:

- a. The Director of Operations is responsible for all facets of the internal evaluation program and associated documentation.
- b. The Director of Operations is granted authority to assign internal evaluation audits to other Orbic Air employees, to include senior managers.
- c. The Director of Operations shall maintain an updated rolling twelve-month internal evaluation schedule that is available to all Orbic Air managers.
- d. When directed by the Company President and the Safety Officer, the Director of Operations shall schedule a special emphasis evaluation. This requirement for this evaluation will be circumstantial, and it will be conducted according to the IEP procedures described in this manual section.
- e. To ensure standardized procedures, all internal evaluations shall use audit checklists approved by the Director of Operations. This checklist may be paper or electronic format.
- f. Internal evaluations will be conducted at least monthly, or more frequently when required.
- g. These checklists must be filled out in entirety for each internal evaluation performed and must contain all of the required analysis and follow-up. The checklist may be completed via paper or electronically.
- h. Any discovered findings, or discrepancies, shall be thoroughly documented by the auditor. Any suggested corrective action should be included in the finding documentation.

- i. Completed evaluation checklists will be forwarded to the Director of Operations for review and further action. If the checklist is not completed satisfactorily, the Director of Operations may re-issue the evaluation to the same auditor or may select another auditor to complete the evaluation. Results will be communicated to senior leadership as appropriate to ensure critical issues are addressed.
- j. Completed checklists will be maintained in paper or electronic form by the Safety Officer in the safety library.

4.3.4 Compliance Monitoring

Compliance Monitoring is a form of internal evaluation and will be completed by conducting evaluations/assessments, at appropriate intervals, to identify regulations, standards, approvals, and exemptions that are applicable. When conducting assessments, Orbic Air shall ensure:

- a. Any changes to existing or issue of new regulations, standards, approvals, and exemptions applicable to aviation activities are identified and assessed; and
- b. Records of the assessments must be kept by the organization.

4.3.5 External Audits

External audits (and inspections) will be conducted periodically for a variety of reasons. It is important to capture the results of all audits in the Orbic Air SMS. External auditors offer a perspective that is unique and apart from that of Orbic Air internal auditors. Every finding resulting from these external audits will follow the procedures listed for internal evaluation findings/corrective actions and documented in their entirety. These results will be combined with internal evaluation results in establishing trends and evaluating the organization.

4.3.6 Internal Evaluation Corrective Action Requirements

When an internal evaluation checklist is completed and submitted to the Director of Operations, each finding (discrepancy) must be analyzed, and a corrective action plan be developed. The finding may require validation, especially if the auditor has some doubt concerning the relevant standard as it applies to the IEP checklist question. Resources in the company or external research are both appropriate to vet results that have any degree of uncertainty. This may be a good role for the Safety Committee. It is entirely appropriate at this point to perform a risk assessment for significant findings and determine if significant risk is present resulting from the discovered deficiency.

A corrective action plan for each finding shall be developed, and include the responsible party, and an assigned due date to complete the action. The responsible party for the functional area associated with a particular finding should also be responsible for correcting that finding. A root cause analysis should be performed to determine what really contributed and/or enabled the problem to occur.

To formalize internal evaluation corrective action procedures and documentation, the following requirements are established for Orbic Air:

- a. A corrective action assignment will result from every internal evaluation finding. An employee(s) who is perceived to have the best opportunity to develop and implement a corrective action that will remedy the deficiency will be assigned by the Director of Operations or another manager, as appropriate.
- b. The Director of Operations will review all corrective actions, verify application, and evaluate any risk or other potential problems remaining after the corrective action is taken.
- c. The finding can be closed after the analysis and corrective action is complete. Findings should be communicated to senior leadership, especially when critical in nature.
- d. An assurance check will be performed between 90 and 120 days after a finding is closed to verify the finding status and effectiveness of the implemented corrective action. This assurance check may be assigned to employees for completion at the discretion of the Director of Operations.

4.3.7 Online Internal Evaluation Process

The Internal Evaluation Program may be executed using the PRISM/ARMOR SMS website IEP Manager Tool. PRISM will supply a monthly checklist which will be used as a guide to examine the critical functions.

1. All appropriate Internal Evaluation processes will be accessible via [REDACTED]
2. Orbic Air management will have a unique and individual login to access these processes from an internet browser. Their login credential will be their email address on file with Orbic Air and the password they setup from an email link triggered to them by the account administrator.
3. The Internal Evaluation processes are located on the PRISM/ARMOR website in the ARMOR Menu and selecting "IEP Manager"
4. Detailed information is located on the PRISM/ARMOR website under Training – PRISM Website Training

4.4 Safety Performance Analysis

The primary task of safety assurance is monitoring and control. This is achieved through safety performance monitoring and measurement, the process by which the safety performance of Orbic Air is verified in comparison with the current safety policies and approved safety goals/objectives. Safety assurance is achieved by monitoring and measuring the outcomes of activities that operational personnel must engage in for the delivery of services by Orbic Air. Information for safety performance and monitoring comes from a variety of sources, including formal auditing and evaluation, investigations of safety-related events, continuous monitoring of day-to-day activities related to the delivery of services, input from employees through hazard reporting systems and external sources. Each of these types of information sources exists to some degree at Orbic Air. The safety library, maintained by the Safety Officer, is the primary source of data for safety performance measurement, and will be utilized by managers at Orbic Air to evaluate risks and performance in their respective areas of responsibility. Safety Assurance outputs must be maintained for a minimum of 5 years.

4.4.1 Safety Performance Indicators

An SMS defines measurable performance outcomes to determine whether the system is truly operating in accordance with design expectations and not simply meeting regulatory requirements. The Safety Officer shall analyze data that has been acquired through the SMS process to demonstrate the effectiveness of risk controls throughout Orbic Air. Additionally, using SMS data Orbic Air managers shall evaluate where improvements can be made to existing organization systems, processes, and procedures. Orbic Air should have a series of safety performance indicators (SPIs) and targets that are appropriate to the operation and help track those items that have been identified as critical to a successful safety program. Orbic Air safety performance indicators consider factors such as the organization's safety risk tolerance, the cost /benefits of implementing improvements to the system, regulatory requirements, and public expectations. A range of high-consequence as well as lower-consequence safety performance indicators provide a more comprehensive insight into the service provider's safety performance. This will ensure that high-consequence outcomes (e.g., accidents and serious incidents) as well as lower-consequence events (e.g., incidents, non-conformance reports, near misses and deviations) are addressed. Once safety performance indicators and their corresponding targets and alert settings have been defined, the performance outcome of each indicator should be updated and monitored on a regular basis. Safety performance indicators should be reviewed by the safety committee for trending, alert levels that have been exceeded and target achievement where applicable. Corrective or follow-up action should be taken when targets are not achieved and/or alert levels are breached.

SAFETY ASSURANCE

To formalize safety performance analysis procedures and documentation, the following requirements are established for Orbic Air:

- Develop a series of safety performance indicators and targets that are appropriate to the type of operation. Wherever possible, these indicators and targets will be specific, measurable, attainable, relevant and time based.
- Utilizing the safety library, the Safety Officer shall make reports available to managers.
- Hazard reports will be categorized to facilitate trend identification.
- IEP results will be recorded and analyzed in a manner that measures the performance results of checklists individually and cumulatively. Additionally, performance trends will be identified across all of the IEP questions completed. The finding can be closed after the analysis and corrective action is complete.
- A safety performance report for the Company President will be prepared quarterly; the contents of this report are dynamic and at the direction of the Company President.
- A safety performance report for the employees of Orbic Air will be prepared semi-annually; the contents of this report are dynamic and at the discretion of the Safety Officer. This report will be disseminated via all practical means to maximize employee awareness.

4.4.1.1 Safety Performance Tracker

Safety Performance Objectives, Targets and Indicators will be established and tracked annually using the following format in a spreadsheet.

Safety Objectives, SPTs and SPIs for CY 20XX								
ID #	Objective	Description of SPT	Description of Associated SPI	How this will be tracked	Q1 Results	Q2 Results	Q3 Results	Q4 Results
1	We want to improve our safety margins in the terminal flying environment	0.15% (.0015) or less of flight hours per quarter of unstable approaches	Actual number of unstable approaches divided by the number of flight hours per quarter	Unstable approaches will be reported in the online PRISM ARMOR SMS software and the appropriate checkbox "Unstable Approach" will be checked. The Search Reports and Safety Intelligence functions of the SMS software can be used to provide the number of events per a given date range. That result will be extrapolated out to determine if the organization is ahead or behind the pace to achieve the target and that summary will be provided in the next four cells to the right. The flight hours will be obtained from operations.	2 reports submitted and 1456 flight hours as of the end of 1st quarter. 2 / 1456 = .00137 (.14%)	6 reports submitted and 1,842 flight hours in 2nd quarter only. 6 / 1842 = .00326 (.33%)		
2	We want to reduce damage to our aircraft and ground equipment related to aircraft ground handling activities.	0.20% (.002) or less of flight hours per year of aircraft ground handling incidents	Actual number of aircraft ground handling incidents divided by the number of flight hours per year	Aircraft ground handling incidents will be reported in the online PRISM ARMOR SMS software and the appropriate checkbox "aircraft ground handling incident" will be checked. The Search Reports and Safety Intelligence functions of the SMS software can be used to provide the number of events per a given date range. That result will be extrapolated out to determine if the organization is ahead or behind the pace to achieve the target. The flight hours will be obtained from operations.	3 reports submitted and 1,456 flight hours as of the end of 1st quarter. 3 / 1456 = .00206 (.21%)	5 reports submitted and 3,298 flight hours YTD as of the end of 2nd quarter. 5 / 3298 = .00152 (.15%)		
3	Same as #2 above	No more than 3 minor aircraft ground handling incidents should occur per Calendar Year	Actual number of minor aircraft ground handling incidents in the Calendar Year	Same as #2 above for documenting each aircraft ground handling incident.	1 report submitted in the Calendar Year as of the end of 1st quarter - slightly ahead of the pace for no more than 3 this year.	1 report submitted in the Calendar Year as of the end of 2nd quarter - slightly behind the pace for no more than 3 this year.		
4	We want to increase our hazard awareness	A minimum of 20 hazard reports will be submitted in the Calendar Year	Actual number of hazard reports submitted in the Calendar Year	Actual hazard reports submitted in the Prism Reporting Program Tracker will be counted just before each Safety Committee and Safety Council Meeting. That result will be pro-rated to determine if the organization is ahead or behind the pace to achieve the target.	4 reports submitted as of the end of 1st quarter - slightly behind the pace for 20 this year.	16 reports submitted YTD as of the end of 2nd quarter - slightly ahead of the pace for 20 this year.		
5	We want to increase our overall safety training and awareness	One "Safety Day" Promotion event will be held for all hands in CY 2022	Did one day of all hands Safety training occur in 2022	In the Prism Safety Locker, a folder will be created and named "Safety Training Day 2022". All documents in support of the training will be kept here and the date of the training shall be recorded in the appropriate quarter in this spreadsheet (columns F through I on this row)	Safety Training Day not scheduled yet	Safety Training Day scheduled for Q3.		

4.4.2 Online Safety Performance Process

SMS data acquired for Orbic Air may be analyzed using a combination of Tools in the PRISM SMS software as follows:

1. Safety Locker. The SPI Tracker document depicted above should be stored in an appropriately labeled folder in the Safety Locker. Supporting evidence of achievement of Safety Targets may also be kept in folders in the Safety Locker. The folders should be locked so that non-Admin users are not able to accidentally delete it.
2. Reporting Program Tool (RPT). In all templates the RPT Admin User should create a category labeled "Safety Performance Indicators" and within that category create a checkbox for each selected SPI that Orbic Air wishes to track. All submitted reports will be reviewed by Safety Officer to ensure any applicable SPI checkboxes are selected. The "Search Reports" function of the RPT can search on those checkboxes for a given date range and provide a list of the reports that contain those selected checkboxes.
3. Safety Intelligence. The Safety Intelligence Tool has a Dashboard contained within it called "Safety Performance Indicators". This dashboard will capture the number of times each of the SPI checkboxes are selected in the RPT and display the results on graphical charts. Other dashboards in Safety Intelligence may capture data that Orbic Air wishes to track for Safety Performance.
4. Other Tools in ARMOR, such as the FRAT, GRAT and/or RAT, may also capture data that Orbic Air wishes to track for Safety Performance.
5. The Tools are accessible via [REDACTED]
6. Orbic Air users will each have a unique and individual login to access these tools from an internet browser.
7. All three Tools are located on the PRISM/ARMOR website in the ARMOR Menu.
8. Detailed procedures are located on the PRISM SMS Tools website under Training – PRISM website Training

4.4.3 Safety Investigation

The sole objective of the internal investigation of an incident involving Orbic Air personnel, facilities, and equipment is the prevention of future accidents and incidents. The purpose of any investigation activity conducted by Orbic Air is not to apportion blame or liability. Internal incident investigations are carried out in order to:

- a. Better understand the events leading up to the occurrence;
- b. Identify hazards and conduct risk assessments;
- c. Make recommendations to reduce or eliminate unacceptable risks; and
- d. Communicate the safety messages to the appropriate stakeholders.

The extent of any internal investigation conducted by Orbic Air should depend on the actual or potential consequence or hazard. Incidents that indicate high risk potential should be investigated in greater depth than those with lower risk potential. Although the investigation should primarily focus on the factors that are most likely to have influenced action, the dividing line between relevance and irrelevance is often blurred. Data that initially may seem to be unrelated could later prove to be relevant once the relationships between the different elements of an occurrence are better understood.

Investigation and analysis of safety occurrences is an essential ingredient of the overall risk management process at Orbic Air. Effective safety management systems largely depend on the quality of the investigation of reported accidents, incidents, and safety issues. Incident investigations will be initiated at the discretion of the Safety Officer.

4.4.3.1 Investigation Phases

The investigation process may be triggered by a hazard notification (report) submitted in accordance with established hazard reporting at Orbic Air, or simply by employee observation of an incident.

The basic phases of an incident investigation conducted at Orbic Air are:

- a. **Set up of the investigation team** with the required skills and expertise. The size of the team and the expert profile of its members depend on the nature and severity of the occurrence being investigated. The investigating team may require the assistance of other specialists. Often, a single person is assigned to carry out internal (to the concerned organization) investigation of an incident considered to have limited potential to cause harm.
- b. **Gathering of factual information** that is pertinent to the understanding of the circumstances and the events leading to the incident. A variety of information sources can be used to collect the necessary data for the reconstruction of the event. To ensure the continued availability of such data for the purpose of aviation safety improvement, information sources need to be protected. Guidance on the protection of safety information sources used for investigations is provided by ICAO Doc 9859 - Safety management manual, Second Edition 2009.
- c. **Event reconstruction** in order to establish the exact sequence of events leading to the safety occurrence with its causal and contributory factors. The output of the reconstruction phase should be a set of events that agrees with recorded information, and which unifies the views of the various persons who were involved in these events immediately before and after the occurrence.
- d. **Analysis of the information** to assess the risk and provide explanation of the technical and operational factors and underlying (including organizational) factors and issues. The analysis shall provide argumentation about why the incident happened and enable the drawing of conclusions and identification of safety actions to eliminate or mitigate the risk.
- e. **Drawing conclusions** on the basis of collected and analyzed information, generally presented by the following categories:
 - i. Main (direct) cause(s) and contributing factors leading to the occurrence;
 - ii. Findings that identify additional hazards which have risk potential but have not played a direct role in the occurrence;
 - iii. Other findings that have potential to improve the safety of operations or to resolve ambiguity or controversy issues contributed to the circumstances surrounding the occurrence.

Identifying the lessons to be learned from a safety occurrence requires an understanding of not just what happened, but why it happened. Therefore, the investigation should look beyond the obvious causes and aim to identify all the contributory factors, some of which may be related to weaknesses at Orbic Air.

- f. **Identification of safety recommendations and actions** to be taken in order to eliminate or mitigate the safety deficiencies identified by the investigation. The safety recommendations are the main product of any incident investigation and are to be made in an incident final report. The incident final report shall be maintained in the safety library.

- g. **Communication of safety messages** to those who have the authority to implement the safety recommendations and to the aviation community in general by means of safety information exchange and lesson dissemination.

For maximum effectiveness, the outcome of the internal investigation should focus on determining hazards and risks rather than identifying individuals to blame and punish. The way the investigation is conducted influences the overall safety culture at Orbic Air. Accordingly, the investigation shall in no case be concerned with a goal of appointing blame or liability. The objective of investigations is accident prevention through the evaluation of relevant information relating to accidents and incidents and the promulgation of related safety information.

4.5 Management Reviews

With a focus on continuous improvement and in order to evaluate safety management implementation and performance at Orbic Air, the Company President will direct a review of the Safety Management System. The review will be conducted at least annually by the Company President or a designated representative and is a management study into the status and allocation of resources applicable to the Orbic Air Safety Management System. The Safety Officer and senior management shall be provided the observations, conclusions, and recommendations from the SMS management review to help facilitate continuous improvement.

The format of the review and subsequent report is entirely at the discretion of the Company President. The management review report will be maintained by the Company President, with access limited to specific approval from the Company President.

4.5.1 Safety Survey

As a component of the annual SMS management review, Orbic Air should conduct a periodic survey of all personnel focused on safety climate, culture, and awareness. This survey can be obtained from PRISM and used in its original form or modified as required to fit the specific needs of Orbic Air. The survey responses shall be collected and analyzed by the Safety Officer for review by the Company President and senior management.

4.6 Management of Change

Change management in SMS is concerned with identifying hazards resulting from change and ensuring the Safety Risk Management Process is applied to them. As such the Management of Change is addressed in the Safety Risk Management chapter of this manual in section 3.2.

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5 Safety Promotion

The safety efforts at Orbic Air cannot succeed by mandate or strictly through mechanistic implementation of policies. Safety promotion sets the tone that predisposes both individual and organizational behavior and fills in the blank spaces in the organization's policies, procedures, and processes, providing a sense of purpose and direction.

Many of the processes and procedures specified in this manual relating to safety policy and objectives, safety risk management, and safety assurance components of the Orbic Air SMS provide the structural building blocks. However, Orbic Air must also set in place processes and procedures that allow for communication among employees and with management. Orbic Air must make every effort to communicate objectives, as well as the current status of SMS activities and significant events. Likewise, Orbic Air must strive to create and maintain a channel of upward communication in an environment of openness.

Safety promotion at Orbic Air includes:

- a. Training and education, including safety competency; and
- b. Safety communication and awareness.
- c. Advocating and strengthening a positive safety culture.
- d. Disseminating lessons learned.

5.1 Training and Education

As part of the Orbic Air safety promotion activities, a safety training program ensuring personnel are trained and competent to perform their SMS duties will be developed by the Safety Officer. The training content shall be reviewed at least annually by the Safety Officer to verify currency. The scope of the safety training shall be appropriate to the individual employee's involvement in the SMS. The effectiveness of the training shall be validated through documented written or oral quizzes, or other method as determined and documented by management.

Safety training should follow a building-block approach and will be conducted initially as part of employee indoctrination training. Refresher training will be conducted annually thereafter. All safety training shall be specifically documented in each employee's training record. Training records will be retained for as long as the individual is employed by Orbic Air. The specific requirements are outlined in the sections below.

5.1.1 Safety Training for Employees

Safety training for employees will address:

- a. The Safety Policy for Orbic Air
- b. Accountabilities and responsibilities of Orbic Air management to the SMS.
- c. Safety responsibilities, including following all operating and safety procedures, and recognizing and reporting hazards.
- d. The definition of hazards, consequences and risks, and the safety risk management process.
- e. Safety roles and responsibilities of all Front Line Staff (Pilots, Mechanics, Technicians, Drivers, Office Support Staff, etc.) to include safety reporting and the Orbic Air safety reporting methods.

5.1.2 Safety Training for Managers

In addition to the training objectives established for employees, training objectives for managers and supervisors will address:

- a. Safety responsibilities, including promoting the SMS and engaging employees in hazard reporting.
- b. A detailed knowledge of the safety process, hazard identification and safety risk assessment and mitigation, and change management.
- c. Safety data analysis.

5.1.3 Safety Training for Senior Managers

In addition to the training objectives established for employees and managers, training objectives for senior managers will address:

- a. Safety responsibilities as assigned in this manual including compliance with national and organizational safety requirements.
- b. Allocation of resources, ensuring effective inter-departmental safety communication and active promotion of the SMS.
- c. Safety Objectives, Safety Performance Indicators, and Safety Performance Targets
- d. Safety assurance and safety promotion, safety roles and responsibilities, and establishing acceptable levels of safety.

5.1.4 Safety Training for the Company President

Training should provide the Company President with a general awareness of the Orbic Air SMS and their role as an Accountable Executive (AE). Safety training for the Company President will address:

- a. The Safety Policy and its required contents (see paragraph 2.1.1)
- b. Responsibilities and Authorities to the SMS of:
 - i. The Accountable Executive
 - ii. Senior Managers
 - iii. The Safety Officer
 - iv. Supervisors
 - v. The Safety Committee
 - vi. Front Line Staff (Pilots, Technicians, Mechanics, Drivers, Office Staff, etc.)
- c. The Safety Risk Management (SRM) Process steps and management decision authorities based on the organization's Risk Matrix.
- d. Safety Objectives, Safety Performance Indicators and Safety Performance Targets
- e. Internal Evaluation Program
- f. Promotion of a positive safety culture
- g. Effective Safety Communication

5.1.5 Safety Training for the Safety Officer

Formal academic courses are available in the field of aviation safety. In addition, PRISM will provide periodic learning material for the Safety Officer to broaden his/her knowledge in selected subjects related to safety management. It is recognized that training is an ongoing effort and should not preclude appropriate individuals from assignment as the Safety Officer. As a minimum the Safety Officer should strive to be trained in the following subjects:

- a. Formal SMS training; *
- b. Accident and incident investigation;
- c. Human factors;
- d. Aviation safety management;
- e. Risk management;
- f. Quality management; and
- g. Hazardous Materials/Dangerous Goods.

*Formal safety management training for the Safety Officer will be attained as soon as practicable after assignment (training must be completed within 6 months for the ARGUS Standard).

5.2 Safety Communication

Clear and regular communication of safety policy, goals, objectives, standards, and performance will be made to all employees of Orbic Air. An effective employee safety feedback system that provides confidentiality as is necessary shall be established.

Communication of the Orbic Air SMS objectives and procedures to all personnel is critical to the overall success of the operation. The SMS should be visible in all aspects of Orbic Air's operations.

Feedback will be provided to hazard or incident report submitters and personnel affected by the control measures.

The Safety Officer shall communicate the performance of the Orbic Air's SMS through widely available bulletins and briefings. The Safety Officer should also ensure that lessons learned from investigations and case histories or experiences, both internally and from other organizations, are distributed widely. Communication should flow between the Safety Officer and operational personnel throughout the organization. Safety performance will be more efficient if operational personnel are actively encouraged to identify and report hazards.

Safety communication therefore aims to:

- a. Ensure that all staff are fully aware of the SMS;
- b. Convey safety-critical information;
- c. Explain why particular actions are taken;
- d. Explain why safety procedures are introduced or changed;
- e. Convey "nice-to-know" information; and
- f. Promote best practices.

5.2.1 Online Safety Communication Materials

PRISM provides a variety of materials that are designed to enhance safety communication. The Safety Officer is responsible for distributing these items to Orbic Air personnel.

To formalize safety communication procedures and documentation, the following requirements are established for Orbic Air:

- a. The Safety Officer will ensure all personnel have access to applicable PRISM materials via distribution or website access.
- b. The Safety Officer will ensure all personnel have access to applicable Safety Committee meeting information materials via distribution or electronic access.
- c. Formal meetings shall be held at least annually to communicate and discuss safety information with all personnel.
- d. Any safety communication materials utilized for required training will be documented in individual employee training records.
- e. Safety communications will be retained for a minimum of 24 consecutive calendar months.

5.2.2 Online Safety Communication Process

Safety Communication may be completed using the PRISM/ARMOR SMS website Safety Locker Tool.

1. All appropriate Safety Communication processes will be accessible via [REDACTED]
2. Orbic Air senior management will have a unique and individual login to access these processes from an internet browser. Their login credential will be their email address on file with Orbic Air and the password will be assigned via email.
3. The Safety Communication processes are located on the PRISM/ARMOR website in the ARMOR Menu and selecting "Safety Locker"
4. Detailed information is located on the PRISM/ARMOR website under Training – PRISM website Training

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6 Accidents/Incidents

Orbic Air accidents and incidents are defined by classification and by category. Before they can be reported, it is necessary for the manager to classify and categorize the occurrence so the proper procedures for reporting and investigation can be followed. When in doubt, use the highest classification.

6.1 Classification for Notification and Reporting

- a. **Major Accident:** An accident that results in substantial property damage, serious injury or illness that requires immediate emergency medical care, or death. For aircraft accidents, the term "substantial damage" is per the definition in the NTSB Part 830 rules.
- b. **Minor Accident:** An accident that results in minor property damage, or which results in injury or illness requiring medical care.
- c. **Incident:** Any other occurrence which results in injury or illness requiring first-aid care, or which results in property damage; a near-miss episode with minor consequences that could have resulted in greater loss.
- d. **High accident potential:** Events or on-going situations that have a high potential for causing injury, illness, or damage to property if they recur.

6.2 Categories for Notification and Reporting

- a. **Aircraft:** Occurrences involving aircraft, whether in-flight or on the ground. This includes aircraft parked on a ramp or in a hangar. In addition to reporting/notification guidelines in this manual, procedures in the Orbic Air Emergency Response Program (ERP) should be followed.
- b. **Employee:** Occurrences involving injury or illness to an employee. If the employee injury or illness is sustained in operations involving aircraft, GSE, or facilities, report under those categories as well.
- c. **Facilities:** Occurrence involving this operation's facilities - example, fire or other catastrophe in a building owned or leased by Orbic Air.
- d. **Ground Support Equipment (GSE):** Property damage to GSE or caused by GSE. Also, personnel injury or illness caused by GSE. If GSE is involved in an aircraft accident or incidents report under that category as well.
- e. **Non-Employee:** Occurrences involving injury or illness to either a customer or non-customer. If injury or illness is sustained in operations involving aircraft, GSE, or facilities, report under that category as well.

The first actions of management personnel at the scene of an accident, incident or high accident potential occurrence will be to take any measures necessary to prevent further injury or illness. This includes emergency medical care. It is essential that this occur prior to any other actions, including notification/reporting.

Notification is a brief communication concerning the accident or incident. It should contain enough information to identify the classification, category, time, location, and a brief description of the occurrence and suspected cause. Do not delay initial notification in an attempt to gather comprehensive information.

The emergency response program and other pertinent details are contained within the Orbic Air ERP document.

6.3 Accident Investigation Response

6.3.1 Aircraft Accident

If an aircraft accident occurs, the company must rely upon prepared and practiced responses. In addition to devoting every available resource to avoiding immediate injury and damage, Orbic Air must quickly begin the actions outlined in the Emergency Response Program (ERP). A key function of the Safety Officer is to ensure the ERP is always up to date, with current management personnel and locator data, as well as numbers to call for all related offices.

Once the accident response has been brought under control, coordination with the NTSB becomes the focal point of the company's investigation of the accident. The operator is an authorized participant in the investigation, under NTSB and international, ICAO Annex 13 rules. The investigating agency will call upon Orbic Air to provide various areas of expertise as part of the investigation team. Orbic Air should expect to deploy a "Go Team" to represent and gather information for later assessment. The deployment and equipping of this team is addressed in the ERP. The functions of various team members can be researched through the US National Transportation Safety Board.

Since the objective of the investigation is to examine all aspects of the accident to determine the root causes, there is no opportunity for putting the operators "spin" on the findings. Lawyers and consultants are generally not permitted on the team, only those with substantial knowledge or expertise to contribute.

NOTE: Any assessment for drug or alcohol testing described in this section will be done in accordance the Orbic Air policy for drug and alcohol testing.

Employees involved in a major accident are required to undergo a drug and or alcohol test. A drug and/or alcohol test should also be considered in a minor accident, incident, and high accident potential cases if, in the managers judgment, there is reasonable suspicion that the employees' actions may have been the result of drug and/or alcohol use. If a drug or alcohol test was performed on any employee, it must be noted on any report forms.

6.3.2 Ground Accidents

These accidents will be investigated by management personnel under these accident investigation guidelines:

Initiate the investigation into a major or minor accident, or an incident resulting in personal injury or illness, within 24 hours after the occurrence. If it becomes apparent that more than 72 hours will be required to investigate the occurrence, then submit a preliminary report to the Company President and follow up with status reports until the final report is complete. Investigations of incidents with only minor damage and no injury or illness should commence as soon as circumstances permit. Complete the investigation and submit the report within five working days.

NOTE: Any assessment for drug or alcohol testing described in this section will be done in accordance the Orbic Air policy for drug and alcohol testing.

Employees involved in a major accident are required to undergo a drug and or alcohol test. A drug and/or alcohol test should also be considered in a minor accident, incident, and high accident potential cases if, in the managers judgment, there is reasonable suspicion that the employees' actions may have been the result of drug and/or alcohol use. If a drug or alcohol test was performed on any employee, it must be noted on any report forms.

6.3.3 Corrective Actions

Corrective actions are the end result of a successful investigation. It should be indicated on the report whether these actions are recommended, planned, or completed. Actions should be specific, doable, and consist of one of three types as follows:

- a. Actions to eliminate the cause or causes of the accident or incident.
- b. Actions to control the circumstances that caused the accident or incident.
- c. Personnel actions such as improved procedures, increased or enhanced training, or actions to discipline employees involved in the occurrence. Discipline is mandatory in those instances where employee carelessness or willful disregard of safety rules or company procedures results in an accident. It should also be considered anytime an employee exhibits conduct which shows a lack of concern for safe operating procedures even if no accident results.

Proposed corrective actions will be reviewed by applicable managers. In the event of disagreement as to causes or solutions, the matter will be resolved in discussions with the Safety Officer.

Corrective actions, as agreed to and annotated on the investigation report, should be carried out by the appropriate managers. The final report should be communicated to all employees to prevent a similar occurrence. The Safety Officer will monitor the corrective action via an assurance check, as described in Section 3.4.3 of this document.

6.3.4 Online Accident/Incident Processes

The Accident/Incident process may be completed using the PRISM/ARMOR SMS website Risk Assessment Tool.

1. All appropriate Risk Assessment processes will be accessible via [REDACTED]
2. Orbic Air senior management will have a unique and individual login to access these processes from an internet browser. Their login credential will be their email address on file with Orbic Air and the password will be assigned via email.
3. The Risk Assessment processes are located on the PRISM/ARMOR website in the ARMOR Menu and selecting "Risk Assessment Tool"
4. Detailed information is located on the PRISM/ARMOR website under Training – PRISM website Training

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7 Forms

7.1 Hazard & Event Report

(example only – actual forms are contained in the PRISM/ARMOR website)

		<u>Hazard & Event Report</u>	
		All Hazard and Event Reports will be assessed by the Safety Officer and reviewed by the Safety Committee. Feedback and corrective action updates will be provided to the submitter and all applicable personnel. Anonymous reports are accepted, however, this inhibits follow-up action. See the SMS Manual for more information on company hazard and event reporting procedures and non-reprisal reporting policy. Hazard and event reports should be submitted online at https://armor.prism.aero (Ask the Safety Officer for your username and password if unknown). This form will serve as a back-up method	
Report #:	Name (Optional):	Date & Time:	
Severity of Hazard:			
☐	Negligible	Probably would not affect personnel safety, but is in violation of a standard	
☐	Marginal	May cause minor injury or property loss less than \$10,000	
☐	Critical	May cause severe injury or property loss greater than \$10,000	
☐	Catastrophic	May cause death or property loss greater than \$1,000,000	
Hazard/Event/Concern Description:			
Suggested Corrective Action:			

FORMS

Hazard & Event Report			
Identified Hazard or Hazard Report:			
Root Cause(s):			
Risk Matrix Results:			
Probability:	Severity:	Recommended Action:	
Risk unacceptable? Describe the unacceptable outcome.			
Risk Control:	Risk Mitigation ☐	Risk Elimination ☐	Operation Cancellation ☐
Control 1: (Existing or New)			
Control 2: (Existing or New)			
Control 3: (Existing or New)			
Residual Risk			
Matrix results after controls are employed:		Included in Company Risk Profile?	
Probability:	Severity:	☐ Yes ☐ No Risk Zone: Risk Area:	
Details of residual risk and/or unintended consequences:			
Monitoring Risk Control			
Control Employed:	Effective?	Costs:	Date:

7.2 Company Risk Profile

(example only – actual templates and profiles are contained in the PRISM SMS Tools website)

RISK AREA	RISK EXPOSURE (VERY HIGH, HIGH, MEDIUM, LOW)	SPECIFIC DETAILS	STATUS
Aircraft Operations			
Departure			
Arrival			
En-route			
Ground movement			
Weather			
Airports			
Security			
Equipment			
Aircraft performance			
Procedures			
Aircraft Maintenance			
Ground movement			
Weather			
Equipment			
Security			
Maintenance performance			
Procedures			
Off-site maintenance			
Tool control			
Aircraft inspection			
Facilities			
Personal injury hazards			
PPE/safety equipment			
Weather			
Equipment			
Security			
Conditions			
Human Factors			
Fatigue			
Company culture			
Air Crew experience / qualifications			
Mechanic experience / qualifications			

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RISK AREA	RISK EXPOSURE (VERY HIGH, HIGH, MEDIUM, LOW)	SPECIFIC DETAILS	STATUS
Training			
Manning levels			
Air Crew performance			
Mechanic performance			

7.3 Flight Risk Analysis Report

(example only – actual forms are contained in the PRISM/ARMOR website)

		Flight Risk Analysis Report FRAT reports should be submitted online at https://armor.prism.aero (Ask the Safety Officer for your username and password if unknown). This form will serve as a back-up method.		
Report Information				
Date and Time:	Aircraft:			
Origin:	Destination:			
Trip ID:	Mission Area:			
PIC:	SIC:			
Crew:	Crew:			
Mission/Equipment Information				
	Score	Factor	Mitigated	
Divert Flight	+1	☐	☐	
Within 1 hour of Shift Start	-2	☐	☐	
Land Within 1 hour of Shift End	+2	☐	☐	
Within 100 lbs. of MGW	+1	☐	☐	
Climate Control on MEL	+1	☐	☐	
Destination +1 Hour Fuel	-1	☐	☐	
GPS on MEL	+1	☐	☐	
TOTAL > 5 Warning: Notify Chief Pilot or Director of Operations				
TOTAL > 10 Critical: Notify Director of Operations				
Crew Information				
	Score	Factor	Mitigated	
< 300 hours in Type	+2	☐	☐	
> 1500 hours in Type	-1	☐	☐	
> 5 hours Flight Time Today	+1	☐	☐	
Last Flight > 30 Days Ago	+2	☐	☐	
< 1 Year with Company	+2	☐	☐	
Last Day of Shift Duty	+2	☐	☐	
> 5 Years in Operating Area	-1	☐	☐	
TOTAL > 5 Warning: Notify Chief Pilot or Director of Operations				
TOTAL > 10 Critical: Notify Director of Operations				

Flight Risk Analysis Report (Continued)

Weather Information			
	Score	Factor	Mitigated
Takeoff Crosswind > 25 Knots	+2	☐	☐
Temp/Dew Point Spread $\pm$ 5°F	+1	☐	☐
Visibility < 4 (offshore)	+1	☐	☐
Visibility < 3 (offshore)	+2	☐	☐
OAT > 90°F	+2	☐	☐
Gust Spread > 10 Knots	+1	☐	☐
Precipitation in Mission Area	+1	☐	☐
Ceiling and Visibility Unlimited	-1	☐	☐
Turbulent Conditions	+1	☐	☐
Wind > 30 Knots	+2	☐	☐
Ceilings < 500 Feet	+1	☐	☐
TOTAL > 5 Warning: Notify Chief Pilot or Director of Operations			
TOTAL > 10 Critical: Notify Director of Operations			
Risk Factor Mitigation Notes			
			Total Trip Score =
Overall Elevated Threshold			
Risk Threshold Level	Total	Action	
Warning	11-19	Notify Chief Pilot or Director of Operations and Obtain Approval	
Critical	≥ 20	Notify Director of Operations	

7.4 Ground Risk Analysis Report

(example only – actual forms are contained in the PRISM/ARMOR website)

 Ground Risk Analysis Report GRAT reports should be submitted online at https://armor.prism.aero (Ask the Safety Officer for your username and password if unknown). This form will serve as a back-up method.			
Report Information			
Date and Time:		Shift:	
Submitted By:			
Notes:			
Work Task/Equipment Information			
	Score	Factor	Mitigated
Technical Data Reviewed	-3	☐	☐
Servicing: Fuel	+3	☐	☐
Servicing: Oxygen	+3	☐	☐
Servicing: Tire Inflation	+5	☐	☐
Unscheduled Maintenance	+4	☐	☐
Aircraft Jacking	+5	☐	☐
Working at Heights (i.e. ladder or on aircraft)	+5	☐	☐
Welding	+3	☐	☐
Unguarded Power Tools	+3	☐	☐
TOTAL > 5 Warning: Notify DOM or DO TOTAL > 10 Critical: Notify Director of Maintenance			
Personnel Information			
	Score	Factor	Mitigated
Scheduled Duty Time: 10 Hours or Less	+1	☐	☐
Scheduled Duty Time: 12 Hours or More	+5	☐	☐
Off-Duty Rest: 8 Hours or Less	+4	☐	☐
Off-Duty Rest: 10 Hours or More	+1	☐	☐
Working Alone	+5	☐	☐
Contract Maintenance Personnel	+2	☐	☐
Personnel Health: Good	-1	☐	☐
Personnel Health: Sick or Emotional Stress	+4	☐	☐
TOTAL >5 Warning: Notify DOM or DO TOTAL > 10 Critical: Notify Director of Maintenance			

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Ground Risk Analysis Report (Continued)

Work Environment			
	Score	Factor	Mitigated
Poor Lighting Conditions	+2	☐	☐
Extreme Temperature Conditions (> 90°F or < 40°F)	+4	☐	☐
Wet/Slippery Surfaces	+3	☐	☐
High Noise Conditions	+2	☐	☐
Chemical Fumes	+2	☐	☐
Trip Hazards	+1	☐	☐
TOTAL >7 Warning: Notify DOM or DO			
TOTAL > 10 Critical: Notify Director of Maintenance			
Risk Factor Mitigation Notes			
			Total Task Score =
Overall Elevated Threshold			
Risk Threshold Level	Total	Action	
Warning	11-19	Notify DOM or DO Obtain Approval	
Critical	≥20	Notify Director of Maintenance	